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OPPORTUNITIES –
Oil & Gas Development In the Mexican Market

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ECONOMIC DEVELOPMENT
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PREFACE

This market study is intended to serve as a guideline for Alberta companies that are interested in the Mexican oil and gas industry – whether they are considering Mexico for the first time or are already active in the market.

The Mexican oil and gas industry is on the verge of great change. Alberta companies would do well to enter the market now in order to get ahead of international competition. Alberta firms currently have the advantage of readily available lines of credit as well as political support for expanding commercial relations between Canada and Mexico.

Companies entering the market for the first time should be prepared to invest time and money in developing their presence there. Mexico is not an easy market, but it can be very lucrative for those with the determination and the ability to persevere. In most cases, companies can expect a return on investment only after at least two to three years of work.

Delayed return on investment is another reason for Alberta companies to become involved now. While domestic business is brisk, firms should be able to afford to lay the groundwork in Mexico. In two or three years' time, a fall in domestic activity may be compensated by returns in this emerging market.

The key to success with Pemex (Petroleos Mexicanos) is perseverance. Companies would be well advised to make as many contacts as possible and keep all options open. The balance of power within Pemex is a shifting entity. It is difficult to predict who will dominate a division between one day and the next.

This study was made possible by Alberta Economic Development and Tourism. Your questions or comments would be welcomed.

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BACKGROUND – UNDERSTANDING THE MEXICAN MARKET

HISTORY OF THE UNITED MEXICAN STATES

Mexico was already populated by large groups of indigenous people when the Spaniards arrived in the sixteenth century. These groups had well established religious and political systems, some of which continue to survive to this day in Mexico's rural areas.

The territory was ruled as a Spanish colony for 300 years until 1821 when it declared its independence from the Spanish throne. That began a period of struggle and upheaval within the country which did not end until Porfirio Diaz achieved relative peace close to the end of the century.

Peace ended with the 1910 Mexican revolution, which was followed by more than ten years of war. This nearly destroyed the agricultural sector of the country and prevented the development of other industries until the late 1920s. Consequently, Mexico's history as an industrial nation is comprised of little more than the past 70 years. For most of that time, Mexico has been governed by the same political party, the Institutional Revolutionary Party, or the PRI.

POLITICAL SYSTEM

Mexico is a federal democratic republic of 31 states plus the Federal District, which is Mexico City. The system is largely autocratic with strong socialist tendencies. The Mexican president enjoys more power than his U.S. counterpart, and federal government obligations toward the general populace are further reaching. Tax revenues are reserved for the federal level of government, which then transfers payments to the states. Public education is financed and usually managed by the federal government as well. (Recent changes to that system provoked widespread demonstrations by students who were refused places in the state university because they failed to reach new admission levels.)

The legislature is divided into two chambers and a judicial branch. Elections are held every six years; the president may not run for more than one administration, or *sexenio*. The president's replacement, chosen by the president himself, manages the re-election campaign for the party. Since the 1930s, no party other than the PRI has officially won a federal election although the system appears to be opening up to more equal representation by other groups.

The president chooses his cabinet, as well as the "enlarged cabinet," which is made up of secretariats and directors general of government corporations such as Petroleos Mexicanos (Pemex).

LEGAL SYSTEM

Mexico follows a civil system of law that is based on the Napoleonic Code or "written law." The judiciary, which is divided into federal and local jurisdictions, has a lesser role to play in Mexico than it does in Canada, because there is less interpretation of law in a civil system.

Federal and individual state codes are separate, as are codes and decrees pertaining to other matters. Businesses are mostly covered by federal codes; for example, codes on foreign investment, exchange control, intellectual property protection, transfer of technology laws, and so on.

Laws relating to commerce include the *Companies Law*, the *Civil Code*, the *Banking Law*, the *Competition Law*, the *Foreign Investment Law*, the *Commercial Code* and tax laws.

Since Mexican labour law is more intrusive than its Canadian equivalent, it is advisable that foreign companies looking to contract local labour seek legal advice before drawing up contracts or hiring employees. Errors in this area can be very expensive, in spite of the lower labour costs.

THE ECONOMY

Mexico follows a market economy, but many commercial transactions are legislated by Mexico's constitution. Economic policy is implemented in the country by the president and congress, and is announced on the first of September every year in the president's annual address, or *Informe*.

Mexico has been a socialist state since the 1910 revolution. The constitution embodies the ideals put forth at that time. As a result, most of the country's development has been protectionist and inward-looking. In the late 1980s, however, Mexico began to open its doors to foreign investment and a number of changes took place. This trend reached a peak during Salinas de Gortari's term. In December 1993, the *Foreign Investment Law* was enacted to permit foreign investment in most economic activities, with the obvious exception of petroleum extraction and commercialization.

Other changes since that time include elimination of trade barriers, reduction of tariffs, privatization of many national industries, signing of the NAFTA agreement and recent developments in the transportation of natural gas.

In December 1994, the trend toward liberalization came to a sudden halt with the devaluation of the peso from 3.5 pesos/$1 US to what over the course of the year settled at 7.5 pesos/$1 US. This had a drastic effect on the economy. With the trade boom, national industry had gone from manufacturing to importing. Then suddenly, imports more than doubled in price, as did debt held in foreign currencies. Interest rates skyrocketed to over 130 per cent in some cases. Mexico fell from its position as a foreign investor's dream to a market to be avoided.

However, exporters benefited from the devaluation. Metal and cement producers, brewers and fabricators, for example, have enjoyed steady growth since the peso's fall.

CRUDE PRODUCTION IN MEXICO – AN HISTORICAL OVERVIEW

Mexico began to produce hydrocarbons in 1901, when oil was discovered in the municipality of Ébano, San Luis Potosi. The first well was 166 metres deep with a production of 50 barrels per day(bpd).

Between 1901 and 1916, production was relatively low and enjoyed gradual expansion. By 1916, Mexico was producing 110,000 bpd, and by 1921 this figure had jumped to 530,000 bpd.

From 1922 to 1937, production suffered a drastic decline in spite of the discovery of several new fields. This decline was attributed to the erratic manner in which producing companies were rapidly depleting wells in pursuit of short-term profits. By 1930, production had fallen to 108,000 bpd.

Foreign firms were also paying their Mexican workers extremely low wages. Repeated attempts by the government to improve the situation failed to bring about significant change. The oil workers incited widespread protests and Mexico's President Lazaro Cardenas, who feared the social unrest would lead to another revolution, reacted to the situation by expropriating oil reserves from the foreign nationals and forming Petroleos Mexicanos

(Pemex) in 1938. A constitutional decree declared that oil reserves were to be the property of the nation. Private industry was forbidden to participate in any aspect of the production, refining, transportation or marketing of petroleum or its by-products. That situation remained unchanged until recently, when private industry was allowed limited participation in some areas.

Pemex managed to bring production up to 200,000 bpd by 1950 but at 490,000 bpd in 1970 it still had not surpassed 1921 levels. In the 1970s, however, new discoveries were made in the Mesozoic fields of the Southeast and the North. According to Pemex folklore, a shrimp farmer complained to the government of an oily film in the water that was affecting his catch. Investigation of the complaint led to the discovery of the huge reserves in that area. The Cantarell complex was the first off-shore platform to be put into operation.

These new fields gave Mexico an unforeseen capacity for production. By 1982 it was producing 2,746,000 bpd. Levels since then have satisfied internal demand and allowed Pemex to export large quantities as well. Since the discoveries of the 1970s, Pemex has been largely responsible for maintaining national income levels. Infrastructure built during this period to accommodate discoveries in the Southern and Marine Zones is largely unchanged.

MEXICO IN 1996 – SURVIVING THE CRISIS

TRADITIONAL INDUSTRIES

AGRICULTURE

Costs of fertilizers, machinery and gasoline doubled with the fall in the peso's value. Most products grown in Mexico are heavily subsidized on the consumer side in order to keep traditional foods such as tortillas, beans, rice and milk affordable for the average Mexican, whose salary did not double with the devaluation. This has meant a drastic drop in revenues for food producers as they have been forced to sell their products at very low prices.

Producers with access to the foreign market have enjoyed moderate growth during the crisis, however. This has served to balance the situation on a macroeconomics level.

MANUFACTURERS

Most manufacturers must rely on some imported components in their production lines. The resultant increase in the cost of consumer goods has priced their products well beyond the means of the average Mexican. The national market, already severely affected by the crisis, dropped even further with the increased prices of manufactured goods.

AUTOMOBILE INDUSTRY

Automobiles doubled in price with the devaluation. Exorbitant interest rates placed consumer loans beyond the reach of most Mexicans. Car sales in 1995 were mostly limited to new BMW and Mercedes models, which began sales at the beginning of that year and were sold to a limited market of wealthy Mexicans not affected by the crisis. Retailers reported 72 per cent fewer sales in 1995 than in 1994.

Mexican producers such as Volkswagen and General Motors have sustained revenues through their export market.

RETAILERS

Thousands of small retailers went out of business. Restaurants, furniture stores, decorating businesses and clothing stores are just a few of the many family owned operations that found themselves without a customer base.

CONSTRUCTION

Construction is beginning to pick up again after a year and a half of little activity. Many projects contracted under loan were halted as interest rates skyrocketed and contractors panicked.

REAL ESTATE

Faced with the devaluation, many Mexicans and foreign nationals who had other options left the country in pursuit of better opportunities. Rents have fallen by half, as have real estate prices. Banks are no longer accepting real estate as collateral on loans, due to the large inventory of houses and businesses they have been left to sell.

FINANCIAL INSTITUTIONS

Mexico's banking industry was privatized in 1988 amid great fanfare by the government. Many well known businessmen purchased banks or started their own. The industry got off to a good start with privatization of airlines, the telephone company and other huge institutions. Money was plentiful.

The first sign of trouble was the Chiapas uprising in January 1994, which was followed by the assassination of Luis Donaldo Colosio, the presidential candidate for the PRI. Many investors removed their capital from the country in anticipation of a backlash following the murder.

When Carlos Salinas finished his term and handed the presidency to Ernesto Zedillo on

December 1, 1994, another major capital flight took place. The PRI party unity began to splinter resulting in a weakening of support for the president.

These events have caused problems for financial institutions, which were largely managed according to the same bureaucratic system as before their privatization. Directors were mostly directors of other businesses or former managers of government-run institutions. They weren't bankers, and their inexperience worsened an already difficult situation.

Mexico's largest banks, Bancomer and Serfin, have been rescued on various occasions by the federal government, and smaller institutions like Probursa have seen their stocks fall from a value of 130 pesos/share to 20. Probursa was recently purchased by the Spanish bank, Banco Bilbao Viscaya (BBV).

Nationalization of the banking industry grows less likely as more of the banks are purchased by foreign institutions, including the Bank of Nova Scotia and the Bank of Montreal. Banking in Mexico will become more stable as the institutions grow on a slower, healthier scale and the exponential increases that occurred during the Salinas administration have ceased. It will be a long road back, however.

POLITICAL RESPONSE TO THE CRISIS

Zedillo's first year as president was memorable because of a drastic crash in the country's economy. Response to this crisis was slow and had mixed results. Zedillo's popularity, as well is mixed in Mexico but he enjoys growing approval abroad.

Zedillo filled his cabinet with young, Harvard-educated economists. Very few experienced politicians were granted the opportunity to respond to the crisis. As a result, the economic models applied during the first year of his term were widely varied and not terribly successful. Measures such as a five per cent increase in the national value-added tax forced Mexicans to squeeze even further their already dwindling resources, and industry was slow in recovering from the devaluation.

A slight turn-around has been noted in 1996. Zedillo is becoming more decisive, and is slowly gaining respect within his cabinet. The country is beginning to come out of its depression and foreign currencies are again finding their way to the national treasury. Growth will be healthier in the future. While Mexico is unlikely to return to its position as an ideal market for investment, where all one touches turns to gold, it will become a good solid investment as the market matures and stabilizes. Alberta firms will do well here in the future as risk diminishes, particularly with the support the Zedillo administration has offered to Canadian participation in the Mexican marketplace.

PUBLIC/PRIVATE COOPERATION

Private industry has had little choice but to cooperate with the administration's decisions. The national network of industry chambers has played a key role in advising the government on private sector opinion; they have highlighted areas of concern and criticized moves that have not benefited the private sector.

One difficulty Mexico faces in this area is that most politicians have made politics their career and they have little practical experience in business. Mexico has a well organized body of private sector representatives but it is sadly underutilized. Diverging interests between civil servants and businessmen is a problem in any country. But in Mexico the situation is further complicated by the centralization of political administration and a system which until recently has been only nominally democratic.

On August 16, 1996, the federal government announced plans to forgive half of the banking debts owed by micro, small and medium-sized businesses. This attempt to bring businesses back to financial solvency will greatly increase support for Zedillo in Mexico.

LABOUR/ MANAGEMENT RELATIONS

Organized labour in Mexico has a long and well entrenched history. All labour groups belong to the National Labour Organization, which is a powerful political force. Mexican unions are very vocal and have earned the respect of other sectors.

Unions have protested many governmental decisions over the course of the crisis but to date have not caused the social upheavals throughout the country which were feared following the Chiapas uprising. Unions that have demonstrated against the government during Zedillo's administration include:

- the Pemex Worker's Union in Tabasco, due to layoffs in the Southern Region
- the Teacher's Union in Mexico, for wage increases
- the Workers of Ruta 100, who were laid off when Mexico City's bus company went into bankruptcy
- the Student's Union, for changes in the social education system.

OVERSEAS TRADE RELATIONS

International trading partners have been supportive of Mexico throughout the crisis. Loans extended by the United States, Germany and Japan have greatly assisted in the country's recovery. President Zedillo is extremely conscious of the international community's importance and has travelled extensively to promote Mexico's democratization process abroad and seek support for what will be a sensitive issue at home – the semi-privatization of some divisions of Petroleos Mexicanos.

PETROLEOS MEXICANOS IN 1996

Today, Pemex is divided into several divisions, each of which is responsible for its own budgeting and administration. (Please see Annex.)

The supervising body is called Pemex Corporate. Pemex's Director General, Adrian Lajous, is head of this organization. Mr. Lajous has many years of experience working with Pemex. This is not always the case because the position of General Director is a political appointment. The six divisions of Pemex Corporate are described in the following paragraphs.

Pemex International, or PMI, is responsible for the marketing of Pemex petroleum products and the purchase of petroleum products abroad to meet the needs of the national market.

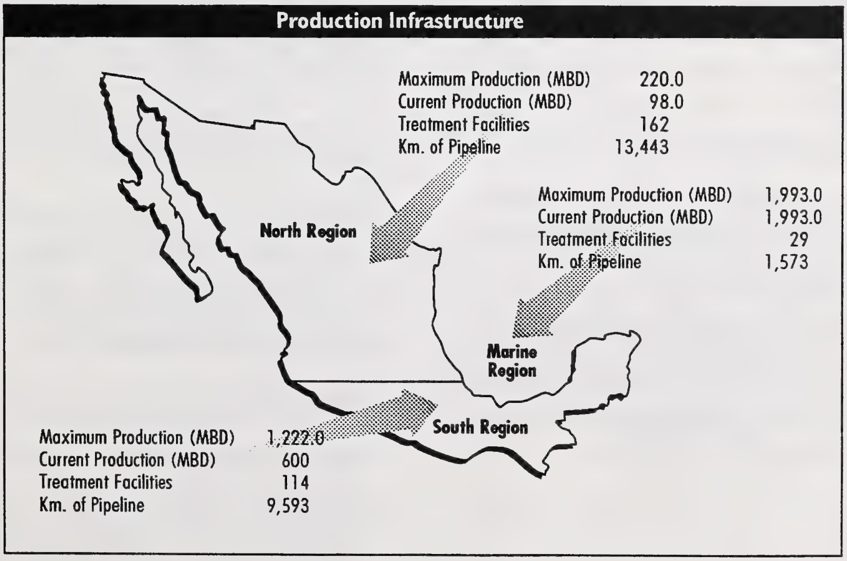
Pemex Exploration and Production, or PEP, is responsible for the exploration, production and transportation of gas and crude oil to refineries and treatment plants. It is assigned the largest budget of the divisions, and is further divided into the North, South, Marine Northeast and Marine Southwest regions.

Pemex Refining is responsible for the production of gasoline and other fuels for national use and export. It also distributes the product and is responsible for the management of Pemex gasoline retail franchises throughout the country.

Pemex Gas and Basic Petrochemicals (PGBP) is responsible for the treatment and distribution of gas and basic petrochemicals. It recently opened some of its responsibilities to foreign participation.

Pemex Petrochemicals is responsible for the production and distribution of all petrochemicals not considered basic. The network of treatment plants is supposed to be privatized over the medium term.

Mexican Petroleum Institute (IMP) is a training institute for petroleum engineers and is also responsible for carrying out research and product testing.



Production Infrastructure

Maximum Production (MBD) 220.0
Current Production (MBD) 98.0
Treatment Facilities 162
Km. of Pipeline 13,443
North Region
Maximum Production (MBD) 1,993.0
Current Production (MBD) 1,993.0
Treatment Facilities 29
Km. of Pipeline 1,573
Marine Region
South Region
Maximum Production (MBD) 1,222.0
Current Production (MBD) 600
Treatment Facilities 114
Km. of Pipeline 9,593

Mexico produces three grades of crude: Maya, Isthmus and Olmeca. Maya crude is heavy, Isthmus is medium and Olmeca is light or superlight, which is found in grades as high as 59 API. As production in fields bearing Olmeca crude increased between 1994 and 1995, Mexico has been able to command higher prices for crude.

Mexican Grades of Crude Produced

	1994	1995
Maya	61%	55%
Isthmus	14%	12%
Olmeca	25%	33%

Source: Petroleos Mexicanos

At the end of 1995, proven hydrocarbon reserves totalled 62.058 billion barrels. Of these, 79 per cent (48.796 billion barrels) was crude and condensates and the remaining 21 per cent was dry gas. Dry gas represents a figure of 67.7 billion cubic feet (bcf). Olmeca and Isthmus grades represent 52 per cent of oil reserves.

Total Hydrocarbon Reserves, 1995

Condensates	11%
Natural Gas	21%
Heavy Crude	33%
Light Crude	35%

Source: Petroleos Mexicanos

Reserves are divided between three producing regions – the North, South and Marine Zones. The Marine Zone is responsible for 46 per cent of total reserves, 56 per cent of the proven oil reserves and 17 per cent of gas reserves. The Southern Zone holds 15 per cent of oil reserves and 29 per cent of gas. The Northern Zone holds one-third of total hydrocarbon reserves, 29 per cent of oil and 54 per cent of gas.

Geographical Distribution of Total Hydrocarbon Reserves, 1995

North	34%
South	20%
Marine	46%

Source: Petroleos Mexicanos

Gross profits for Pemex in 1995 were 84,970 million pesos. This is roughly equivalent to $11.329 US billion, 20 per cent higher than in 1994. This increase is largely due to the increase in the price of oil that year. Penex Exploration and Production (PEP) was responsible for 97 per cent of that total.

Net profits totalled 11.382 billion pesos, or $1.518 billion US.

The Mexican crisis continued to affect internal sales throughout 1995. Sales of petroleum by-products and natural gas fell 6 per cent during the year, the greatest decline ever registered in Pemex's history. Exports, however, made up for the loss, with an increase over 1994 of $886 million US, and a decrease in imports of $260 million US. This change gave Pemex a favourable export balance of $7.197 billion US. This balance is unlikely to shift too much during the short term, as Pemex's revenues have been pledged to the loans granted to Mexico by the United States. Imports by Pemex will continue to be curtailed until the loans have been paid off. Thus far, Mexico has made three early payments on the debt, a trend which may see Pemex released from its increased national obligations earlier than planned. At the time of writing, only one payment is left outstanding.

Several important changes were made in 1995 to facilitate the participation of private industry in the oil industry in Mexico. *The Regulatory Law of Constitution Article 27 with respect to Petroleum* was modified to open the industry to foreign investment and competition in various areas, including the transportation, distribution and commercialization of natural gas.

Additionally, each of Pemex's subsidiaries was required to submit proposals on how to increase efficiency and reduce costs in their areas. This represents a much more comprehensive view of planning than was previously evident in Pemex's administration.

The Corporate Operations Division was replaced by the Corporate Planning Unit, which specializes in strategic planning over the long term and provides a more complete perspective of the industry. This unit was also assigned the responsibilities of evaluation and information. Programming budgeting, price fixing and investment analysis went to the Corporate Financial Division.

Two controlling bodies were created: the Corporate Regulatory Division and the Audit Division. These bodies are responsible for audits, complaints and civil charges.

Industrial Security Audits, Environmental Protection and Energy Savings were decentralized and their resources transferred to each of the regions. Pemex Corporate will now attend exclusively to internal matters, management of the regions and elaboration of statistics.

A foreign dependency, Integrated Trade Services Inc., was created in Houston, Texas, to insure and transport North American products purchased by Pemex. The company replaces the Pemex representation office which was closed in 1994.

OPPORTUNITIES –
AREAS OF EXPANSION FOR ALBERTA FIRMS

Current production levels were analyzed in Pemex's business plan for 1995 - 2000. If current investment levels ($1,385.5 billion US) are kept constant, Pemex will be able just to maintain its level of production. Predictions are that production in the year 2000 will be approximately 2.922 million bpd, little more than now.

Investment by Pemex in 1995 was 15,841 million pesos, 58 per cent more than in 1994. But in dollar terms this was actually $1,230 million US less.

Fifty-three per cent of the investment budget was spent on drilling and exploratory studies, plant maintenance and capital purchases. Services comprised 36 per cent of the total.

EXPLORATION AND PRODUCTION (PEP)

PEP consumed 61 per cent of Pemex's investment budget in 1995. As Pemex's largest purchasing division, it warrants a good deal of analysis. PEP's field production program will be examined in detail, due to the weight of budget expenditure in this area.

Pemex Exploration and Production: Crude Produced, 1995

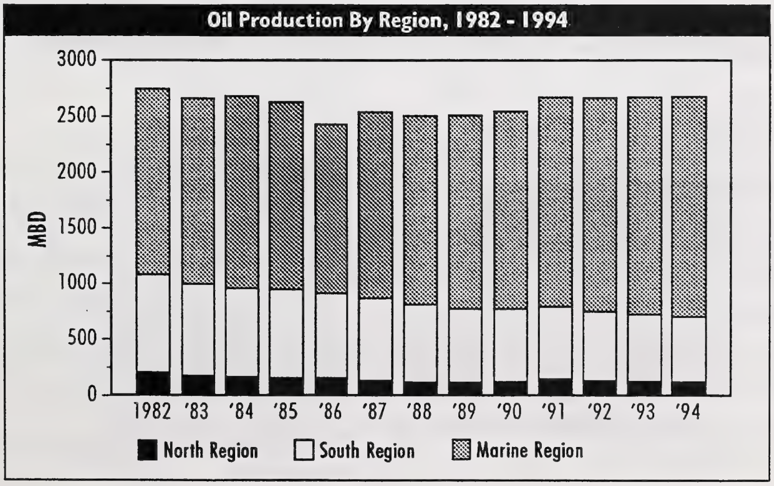
By Type	
Heavy	47%
Light	33%
Superlight	20%

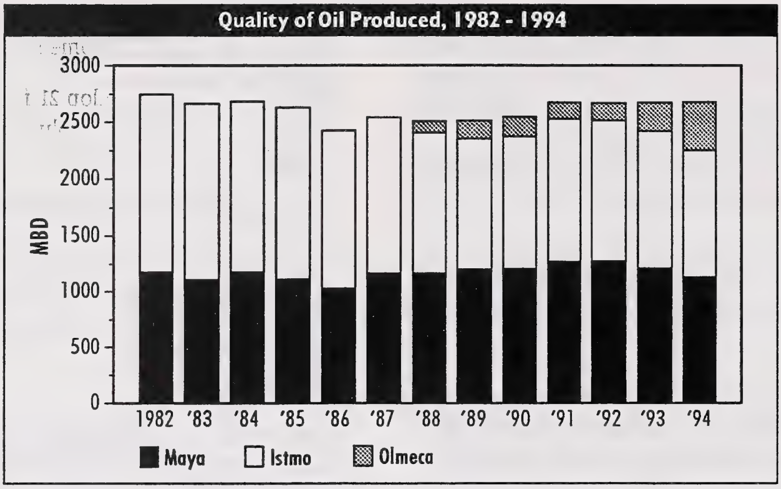
By Region	
North	4%
South	22%
Marine	74%

Total 2.617 million barrels per day

Source. Petroleos Mexicanos

As is evident in the following table, production in the Northern Region has steadily declined over the past 15 years, averaging about 100,000 bpd. The Southern Region has followed suit, due to the age of its wells and a lack of investment in enhanced oil recovery. It averaged close to 600,000 bpd in 1994. The Marine Zone, now known as Marine Southwest and Marine Northeast, has expanded its production and compensated for the declines in the rest of the country.





Quality of Oil Produced, 1982 - 1994

Production of heavy oil (Maya) increased until 1992, and then fell slightly. Light crude production has increased over the past few years, thus maintaining Mexico's production at close to an even rate for both types. Production of superlight crude, or Olmeca, has increased with new discoveries in the South.

Mexico's highest-ever level of production of liquid hydrocarbons (crude plus gas condensates) was achieved in 1993 at 2.744 thousand barrels per day (mbd).

Hydrocarbon production as a whole decreased 3 per cent in 1995 to an average of 2.617 mbd. This decrease is due in part to hurricanes Opal and Roxanne, which passed through the Gulf of Mexico in October. Production of heavy crude in the Marine Zone was shut down completely and light crude shut down partially. Ports were closed for a number of weeks as repairs were carried out. An explosion in the South and a pipeline leak also contributed to the decline in production.

During May 1996, Pemex reported an average total crude production of 2,874,257 bpd. The percentage breakdown according to region is shown in the following table.

Average Daily Production of Crude: May, 1996

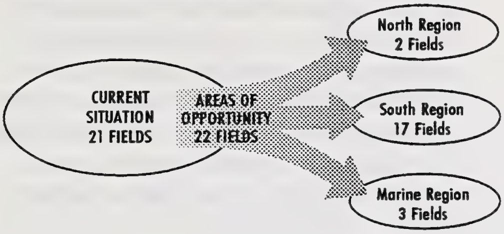
Marine Zone Northeast	47.3%
Marine Zone Southwest	27.3%
South Zone	21.9%
North Zone	3.5%

Source: Pemex Exploration and Production

In 1992, Pemex undertook a business plan called "Colibri," or "Hummingbird." This plan resulted in the implementation of new strategies for crude production in all three of the producing regions. The aim of the program was to make the most of the 474 fields already in operation. It was determined that 90 per cent of the production and 95 per cent of the reserves are concentrated in 74 fields.

Pemex decided to look at the country's fields as a whole rather than independently, and employ new technology and methods of production. A three year plan was devised for the 74 priority fields. Each field was characterized according to mathematical models, in order to accurately predict the most fruitful production systems for each site. Methods of enhanced oil recovery tested included artificial lift systems, well remediation, electrocentrifugal pumping systems,

Secondary Recovery

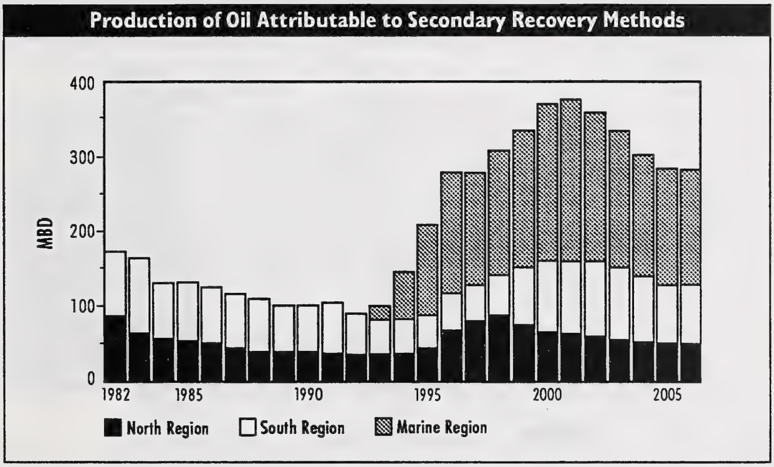


water injection and others. PEP also undertook to replace outdated equipment.

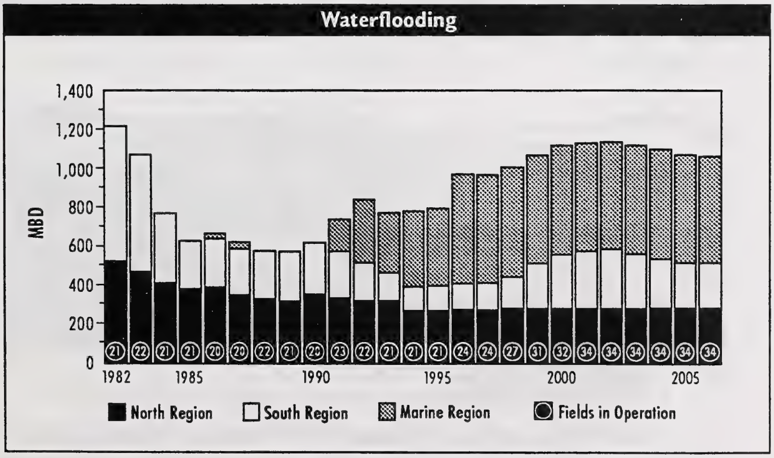
PEP then began to develop 21 fields which currently produce at low volumes due to a lack of investment in secondary recovery methods.

It was found that many of the fields required the application of water injection systems. The average daily volume of water injected in 1993 was 744.7 mbd, and increased crude production as a result of these applications was 99.3 mbd.

Production of Oil Attributable to Secondary Recovery Methods



Waterflooding

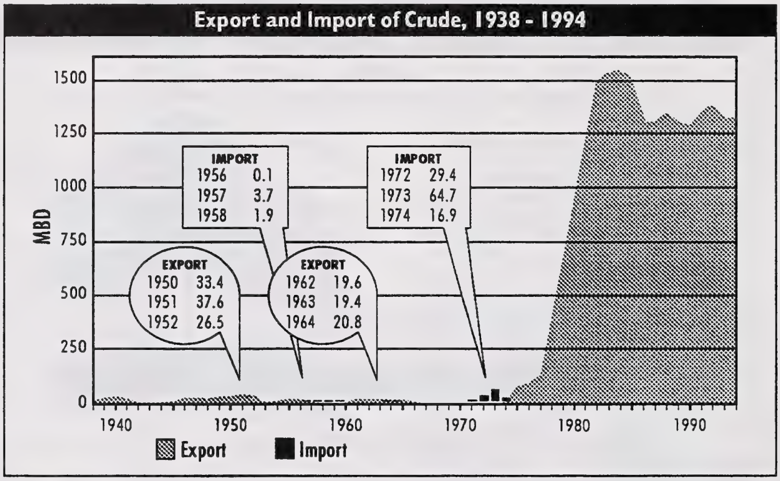


Plans over the medium term are to apply water injection in 34 fields with an eventual volume of close to one million barrels per day.

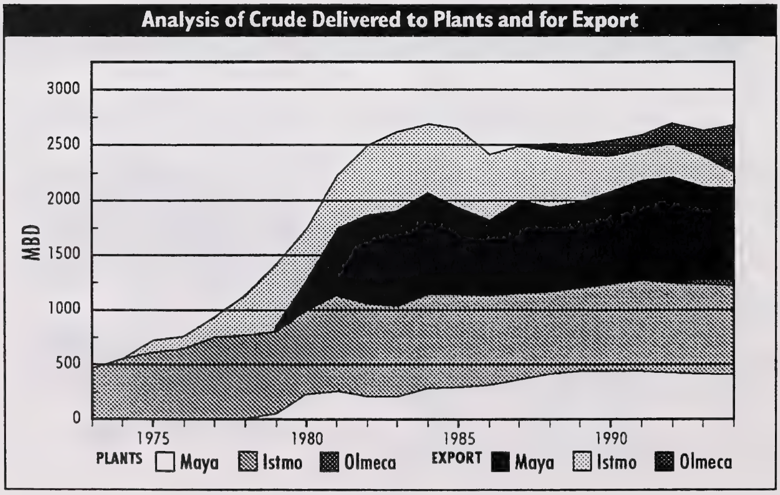
It is hoped that in some cases the increase in production made possible through secondary recovery methods will equal that of the reserves found in some of the new fields. This has already proven true in the Marine Zone, where platforms have been expanded to allow for production far beyond what was originally predicted.

During the previous administration, PEP was able to increase its delivery of crude to refineries, reaching a high in 1993 of 1.306 million bpd. Exports averaged around 1.326 million bpd. Significant in this figure is the increase in the production of Olmeca, or light crude, which went from 72,000 bpd in 1988 to 220,000 bpd by 1993. This crude, due to its lower processing costs, greatly increased foreign earnings during that period.

Export and Import of Crude, 1938 - 1994

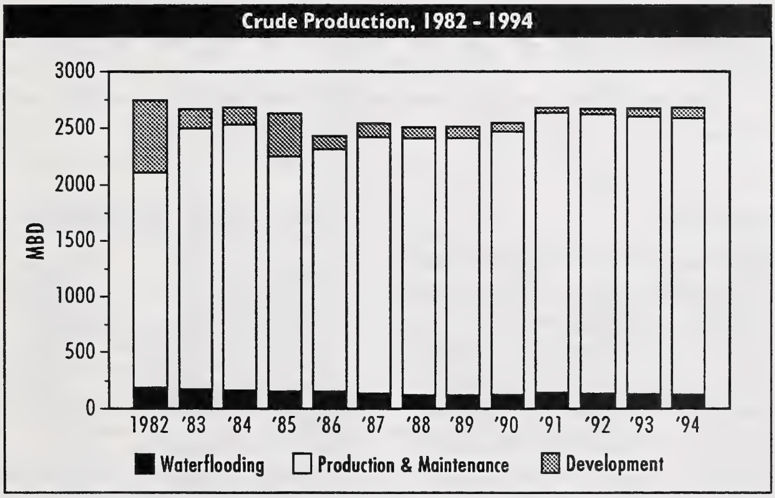


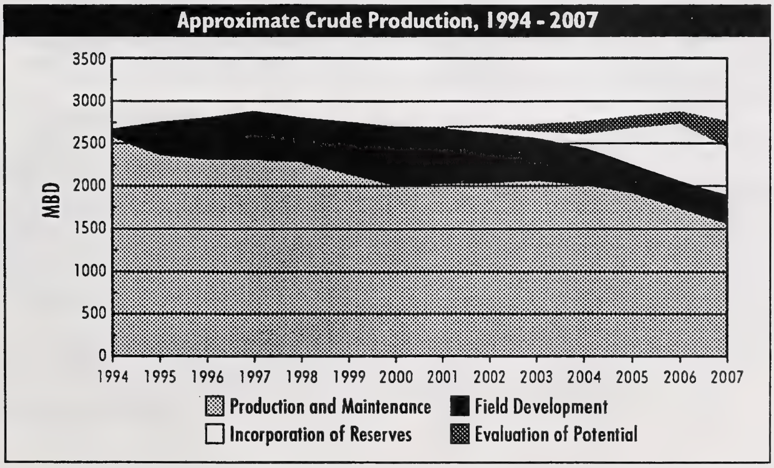
Analysis of Crude Delivered to Plants and for Export



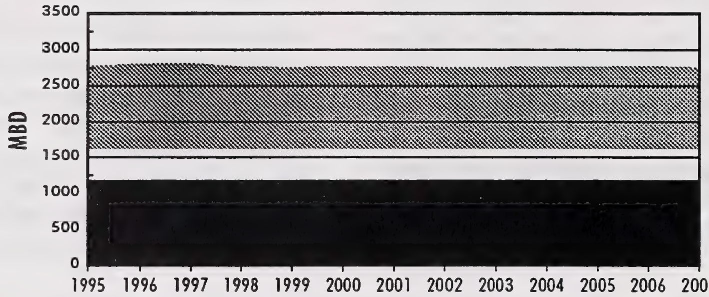
Pemex attributes these increases in production to two projects which increased storage capacity and improved production methods in the Southern Region. However, authorities are also aware that there is much to be done in each of the regions to continue the improvement of production into the next millennium. High quality superlight crude depreciates when mixed with crude of lesser grades. Pemex has plans to isolate the fields that produce higher quality Olmeca crude and send this product to refining through a separate network.

As is evident in the following chart, production of crude in Mexico is expected to sustain itself to the year 2001. Following that period, unless further investment is made in the optimization of reserves, production will begin to decline. New fields must be developed and incorporated, and processing capacities must be increased and improved.





Approximate Quality of Crude Production, 1995 - 2005



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
■ **Maya**	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
□ **Olmeca**	450	450	450	450	450	450	450	450	450	450	450	450	450
▨ **Istmo**	1,118	1,187	1,219	1,162	1,080	1,057	1,067	1,055	1,049	1,056	1,097	1,132	1,030
TOTAL	2,768	2,837	2,869	2,812	2,730	2,707	2,717	2,705	2,699	2,706	2,747	2,782	2,680

FUTURE INVESTMENT

At the time of writing, with budget approvals still pending, PEP is planning future investment along two lines, depending on which investment portfolio is approved by the federal government. Their "basic plan" includes only the essentials, which would grant them a 28 per cent increase in the first year, 31 per cent in the second and 11 per cent in the third. This plan would allow PEP the funds to continue priority investments made this year and finance them over the next two, and to finish projects that have already been started. This plan would see crude production rise to 3.3 million bpd by 2002.

Profile of Basic Investment Plan, in $ Billions US*

	1.803	2.364	2.613
YEAR	**1996**	**1997**	**1998**
Production Increase	50.0%	54.8%	64.6%
Improvement of Crude Quality**	9.7%	15.1%	15.7%
System Integration (Pipelines)	27.2%	19.4%	10.2%
Others***	13.1%	10.7%	9.5%

* *$1 US = 7.5 Mex pesos*

** *Includes distribution and characterization, incorporation of reserves and field evaluations.*

*** *Includes distributable fixed investment, mostly maintenance of current production levels, as well as participation in projects with other divisions, such as in General Services, or storage facilities.*

Investment Planned Over the Next Three Years ($Billions US)

	1996	**1997**	**1998**
Marine Zone	1.338	1.7825	1.986
South Zone	.3985	.4964	.525
North Zone	.0665	.0851	.102
	1.803	2.364	2.613

Source: Petroleos Mexicanos

Estimated PEP Production Levels, with Planned Investments

Total PEP	**Units**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Crude	MBD	2,274.74	2,846.96	2,956.61	2,954.51	3,058.18	3,089.36
Heavy	MBD	1,291.01	1,353.46	1,442.97	1,496.49	1,558.35	1,31.46
Light	MBD	975.64	1,003.31	1,036.37	1,007.85	1,054.45	1,084.26
Superlight	MBD	461.08	490.19	477.18	450.27	445.38	473.64
Natural Gas	MMCFD	3,829.58	4,280.50	4,272.86	4,238.03	4,577.32	5,072.09
Condensates	MBD	175.32	195.85	178.11	172.13	180.61	195.23
NORTH ZONE							
Crude	MBD	97.65	101.65	104.67	111.41	144.41	177.05
Heavy	MBD	52.81	54.85	55.78	54.64	53.68	51.88
Light	MBD	44.84	46.49	48.89	56.77	90.40	124.29
Superlight	MBD	0.00	0.00	0.00	0.00	0.33	0.88
Natural Gas	MMCFD	561.56	693.30	719.61	802.81	1,010.97	1,192.97
Condensates	MBD	0.80	0.88	0.92	1.02	1.29	1.52
SOUTH ZONE							
Crude	MBD	591.52	630.57	621.34	596.06	599.73	599.63
Heavy	MBD	1.01	1.03	0.93	0.84	0.77	0.72
Light	MBD	129.43	144.90	152.02	152.60	166.13	165.22
Superlight	MBD	461.08	484.64	468.40	442.62	432.83	433.69
Natural Gas	MMCFD	1,840.41	2,033.60	2,168.19	2,098.12	2,098.12	2,364.43
Condensates	MBD	16.33	19.35	20.63	19.96	20.57	22.50
MARINE ZONE							
Crude	MBD	2,038.57	2,115.05	2,230.50	2,247.14	2,314.04	2,312.68
Heavy	MBD	1,237.19	2,297.57	1,386.26	1,441.01	1,503.90	1,573.36
Light	MBD	801.37	811.93	835.46	798.48	797.92	794.75
Superlight	MBD	0.00	5.55	8.78	7.65	12.22	39.07
Natural Gas	MMCFD	1,427.61	1,553.60	1,385.06	1,337.10	1,404.37	1,514.69
Condensates	MBD	158.19	175.62	156.56	151.14	18.75	171.22

Source: Petroleos Mexicanos

Beyond the basic plan, Pemex has a project wish list which depends on approval of further funding. This plan would bring production of crude to 3.5 million bpd by the year 2001. Gas would be produced at a rate of 5800 mmcfd (million cubic feet per day).

This case would require the incrementation of investment by 62.5 per cent for 1996, 37 per cent for 1997, and seven per cent for 1998.

The following table is an analysis of this plan.

Analysis – Investment Profile of Desired Plan

Total Investment ($ Billions US)	2.2615	3.122	3.346
Increase in Production	56.9%	59.9%	70.6%
Improvement in Crude Quality	10.0%	18.7%	15.4%
Reliability of System	22.7%	14.7%	8.0%
Others	10.4%	6.7%	6.0%

Source: Petroleos Mexicanos

Looking further into the future, PEP is analyzing its available investment for the years 1999 - 2000. It will be undertaking many studies over the next few years to determine where the highest returns on investment can be made. PEP has stated, however, that investments made during 1999 - 2000 will result in higher production percentages only after the year 2002.

Investment for the beginning of the next millennium will be decided in the year 1998. To that end, the following scenarios have been proposed.

- Maintaining the level of production achieved in the year 2000 for the following five years, which will require an investment of $160 million - 213.3 million US/year, during the years 2001 - 2003.
- Increasing the level of production by sustaining the maximum level of investment, or increasing it by an additional 10 per cent each year between 1998 and 2003, to bring an additional crude production of 620,000 bpd, to a total of 2.4 million bpd by the year 2002.

FUTURE PROJECTS

PEP's future projects can be divided into two categories: a) development, or incorporation of reserves and b) production and maintenance.

DEVELOPMENT

One of PEP's major goals is to bring of all of Mexico's reserves into production. Eighty per cent of the 1995 budget was spent in this area. Incorporation of reserves refers mostly to the discovery of new non-associated gas fields and crude fields with a high gas-oil ratio. Mexico is trying to bring its gas production up to market needs.

In 1996, Pemex will continue to invest in programs designed to increase or optimize production, increase the quality of crude and improve the reliability of transportation systems. This year, investment was divided between these three areas: 44 per cent, 13 per cent, and 32 per cent respectively.

Field Development. PEP's incorporation of reserves program relies on the development of new fields, particularly in non-associated gas

Exploratory Wells in 1996 (Incorporation of Reserves)

Project	Type of Hydrocarbon	Wells to Be Drilled (08/96)	Wells Being Drilled (08/96)
NORTH REGION			
Reynosa	Gas	2	1
Presa Falcón	Gas	3	2
SOUTH REGION			
Julivo	Oil	2	1
Comacalco	Oil	2	0
Tabasco Coast	Oil	2	0
MARINE NORTHEAST REGION			
Campeche East	Oil	3	2
MARINE SOUTHWEST REGION			
Campeche Tabasco Coast	Oil	3	1

Source: Petroleos Mexicanos

Development Wells in 1996 (Field Optimization)

Project	Type of Hydrocarbon	Wells to Be Completed	Completed Wells	Wells Being Drilled
NORTH REGION				
Arc-Culebra	Gas	19	17	2
Mojarreñas	Gas	0	6	0
Cuitlahuac	Gas	0	0	1
Corindon	Gas	0	0	1
R. Nuevo	Oil	6	0	1
S.Agueda	Oil	4	0	1
SOUTH REGION				
Sen	Oil	8	1	5
Jujo-Teco	Oil	4	2	3
Catedral	Oil	3	2	1
Samaria	Oil	3	2	0
Central	Gas	3	0	0
A. Prieto	Oil	1	0	0
Jacinto	Oil	2	2	1
Caparroso	Oil	1	0	1
Chincorro	Oil	1	0	1
Cunduacan	Oil	1	1	0
Luna	Oil	1	0	0
Pto. Ceiba	Oil	1	0	0
Agave	Oil	1	0	1
Muspac	Oil	0	0	1
Cardenas	Oil	0	0	1
C. Nanchital	Oil	0	0	1
MARINE NORTHEAST REGION				
Cantarell	Oil	11	5	3
Ku	Oil	2	0	0
Zaap	Oil	0	0	1
MARINE SOUTHWEST REGION				
Abk-Pol-Chac	Oil	2	2	2
Och-Uech-Kax	Oil	2	4	2
Taratunich	Oil	3	1	0
TOTAL		79	45	30

Source: Petroleos Mexicanos

fields and high gas-oil ratio fields, and on increasing production from wells in old fields through secondary recovery programs.

In 1995, field development consumed 41 per cent of PEP's annual budget.

Drilling is currently administered both directly by Pemex and under contract in some situations. This departure from traditional drilling operations (Pemex previously bought and operated its own rigs) has allowed Pemex to increase efficiency and bring its use of technology up to international levels. Contracts are awarded in a variety of ways, depending on the application being addressed. Only two international companies are currently contracting drilling services to Pemex, both of which operate off-shore.

In 1995, Pemex undertook to drill a total of 10 exploratory wells and 94 developmental wells, which required the monthly use of 33 exploratory drilling rigs, seven of which were dedicated to exploration and 26 to development. In all, 102 wells were completed. The reported success rate was 60 per cent for exploratory wells and 97 per cent for development wells. These operations resulted in the discovery of a new field in the Marine Zone named "Bolontikú" and a new reserve in the Zaap field, which together represent an increase of 363 million barrels in the national reserves.

Summary of Wells to Be Completed in 1996

REGION	EXPLORATORY	DEVELOPMENTAL	TOTAL
North	6	29	35
South	4	30	34
Marine Northwest	2	13	15
Marine Southwest	7	7	14
Total	**19**	**79**	**98**

Source: Petroleos Mexicanos

PEP uses the following technologies in these exploratory and developmental activities:

- Jackup rigs and workover rigs of the tetrapod or tripod type (to increase development in the Marine Zone)
- Drilling horizontal wells both on land and off-shore (to increase production)
- Slim hole drilling (in the development and maintenance of wells)
- Environmentally friendly (non-oil based) drilling fluids
- PDC polychrystalline diamond drilling bits (to increase drilling efficiency)
- Underbalanced drilling (in mature or depreciated fields)
- Re-entry drilling (to achieve greater production within the same reserve or in neighbouring reserves)
- Clean fluids (in well completion to control mud production)
- Various coiled tubing applications
- "Zero discharge"
- Top-drive drilling (to optimize drilling costs and times)
- High-tech gamma-ray meters (in the mediation of production on individual wells and production pipelines, to determine the remaining production potential in the formation and to detect waterflows).

PEP will place particular emphasis on the use of horizontal drilling to increase its production capacity. Two such wells drilled in the Cantarell (Marine Northeast) field produced an average of 84 per cent more than traditional drilling techniques had produced in the same field.

PRODUCTION AND MAINTENANCE

PEP is trying to increase its production efficiency and storage capacity to meet the market's growing needs. Seventeen per cent of PEP's 1995 budget went to expenditures in this area, including well remediation, artificial lift systems, secondary recovery methods, crude and gas pipelines, and new production installations.

Well Remediation. PEP recently completed studies on the reactivation and untapping of shut-in wells. The Northern Region will receive approximately $40 million US over the next three years for such programs in the Poza Rica and San Andrés fields.

The following services will be required:

- Drilling
- Nitrogen injection
- Fracturing
- Coiled tubing applications
- Cementation
- Other related services.

Artificial Lift Systems. Of the more than 5000 wells in PEP's production system, 4,641 are operating producers, while 1,841 are fluid and could become producers with the addition of an artificial lift system. Also planned is the upgrading of currently operating wells through the addition of more modern equipment. PEP currently has 1,737 wells operating with a pumping system that consumes 370 mmcfd of gas. Replacing outdated equipment and utilizing mechanical pumping systems is planned to allow for increased efficiency in this system as well as to improve safety in areas close to residences. In the South and North Regions, plans are to update 341 mechanical pumping systems with automatic controls.

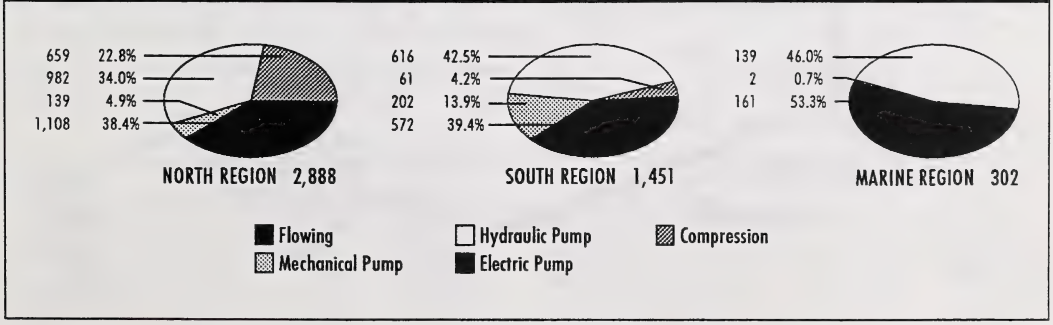
Secondary Recovery Methods in Mexico are mostly limited to waterflooding. The technique is currently being used in 22 fields and is being planned for use on 34 additional fields, with an expected volume of more than one million bpd.

Fields in Mexico Using Waterflooding

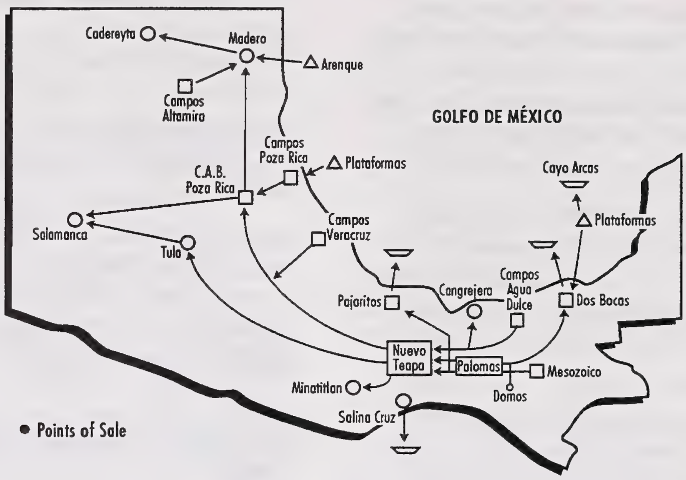
Region	Number of Fields
North	2
South	17
Marine	3

Crude and Gas Pipelines. Currently, PEP operates a distribution system of gas pipelines which take wet sour gas and wet sweet gas from production fields to seven petrochemical processing facilities located along Mexico's Gulf Coast. The system also takes dry sweet gas from Ocosingo, Veracruz, and Reynosa to the national pipeline network operated by Pemex Gas and Basic Petrochemicals.

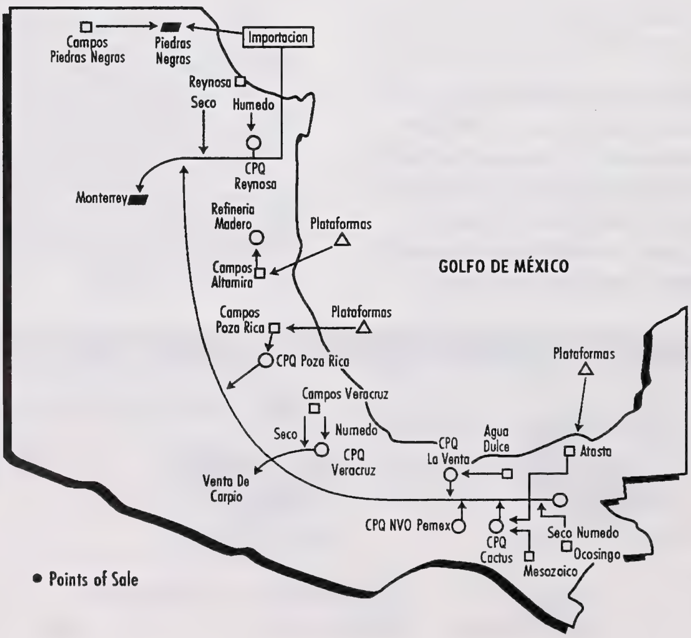
Operating Producing Wells



Distribution and Transportation System: Natural Gas

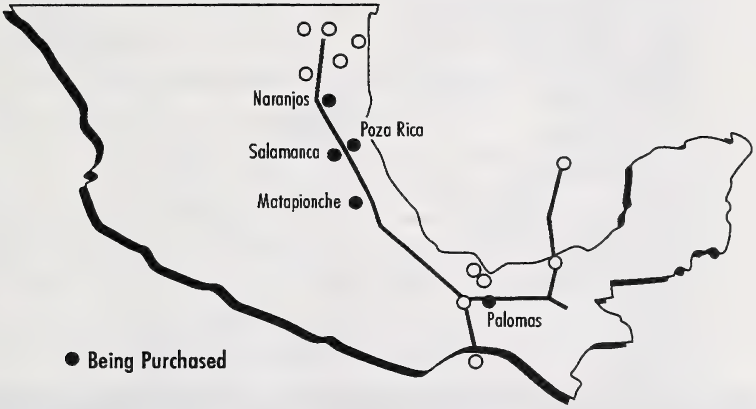


Distribution and Transportation System: Crude



Crude Evaluation at Points of Sale

	Before 1992		Current		Future	
	EXPORT	INTERORG.	EXPORT	INTERORG.	EXPORT	INTERORG.
Installed Systems	4	1	4	2	4	16
% Error	0.26	1.60	0.20	0.90	0.20	0.20



Crude pipelines take product from recollection, separation, treatment, storage and pumping systems to points of sale at Pemex Refining for domestic use and Pemex International for export. Branches of the pipeline network operate in a variety of diameters.

Internal sales to Refining are carried out along 12 points of sale. Export crude is brought to the ports of Cayo Arcas, Dos Bocas, Pajaritos and Salina Cruz.

Both PEP and Refining are working on updating their "points of sale" system. Implementation of a quality-control analysis system is planned to reduce errors in international sales and avoid costly penalties.

PEP's Pipeline Network

North Region	11,527 km
South Region	11,082 km
Marine Northeast	1,672 km
Marine Southwest	482 km

Future projects for crude and gas lines, which fall into PEP's extraordinary budget, will not likely be carried out in 1996-97 unless further funding is approved. The aims are to improve the reliability of the system and increase capacity to manage rising production.

Future Projects, Crude and Gas Lines

Description	$ Millions US
MARINE REGION	
New 36" x 91 km gas pipeline from Atasta to Cd. Pemex	107
36" x 80 km oil pipeline from Bombeo 1 Platform to Dos Bocas	13
Replacement of pipelines	27.2
SOUTH REGION	
Replacement of pipelines	68
Maintenance	19
NORTH REGION	
Replacement of pipelines	4.17
Maintenance	0.6
Total	238.97

Source: Petroleos Mexicanos

PEP Treatment and Processing Facilities

Unit	North Region	South Region	Marine Northeast	Marine Southwest	Total
Separation, Storage and Pumping Batteries	117	75			192
Crude Dehydration Plants	4	4			8
Gas Dehydration Plants	9	1			10
Storage and Pumping Centres	2	2			4
Crude Recollection Stations	42	1			43
Gas Recollection Stations	100	17			117
Crude Pumping Stations	1	1			2
Gas Compression Stations	36	29	1		66
Water Pumping Stations (Services)	2				2
Waste Water Treatment Facilities	3				3
Waterflooding Stations	3	9			12
Mud Plants	1	2			3
Marine Platforms	8		67	82	157
Port Terminals			1	1	2
Total	328	141	69	83	621

Source: Petroleos Mexicanos

New Production Installations. As hydrocarbons go from producing wells to subsidiary division points of sale and export terminals, they pass through a system of 621 treatment facilities of various types, 12,609 recollection and transport pipelines, with a total of 24,763 km of pipe, which varies in diameter from 2" to 48".

Facilities are being upgraded, replaced and increased to accommodate Mexico's growing hydrocarbon production. The Olmeca Project and the Tabasco Coast project are the first steps in that process.

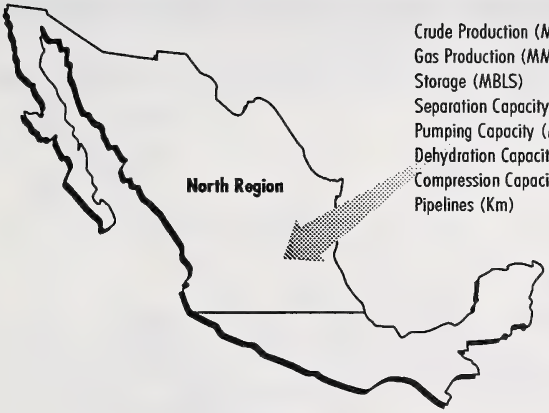
The **Northern Zone**, which has the oldest fields and the most numerous installations in the republic, now produces less than half of what it once did.

Today, the region has the highest maintenance and operation costs in the country (per barrel produced). Exploration and Production is analyzing methods of modernization; otherwise the area will become too costly to keep in operation.

Exploration in the Northern Region focuses on the incorporation of non-associated gas fields in the Reynosa district (66 per cent of the North's field-development budget) and on fields with a high gas-oil ratio in the Poza Rica district (34 per cent of the North's field-development budget). One project under analysis deals with the area called Cerro Azul-Naranjos. PEP plans to save substantial energy costs by shortening the pipeline network and relocating its dehydration facilities. Also planned is the updating and replacement of pumping systems in the Poza Rica and Altamira districts, where PEP is replacing hydraulic lift systems with mechanically balanced systems.

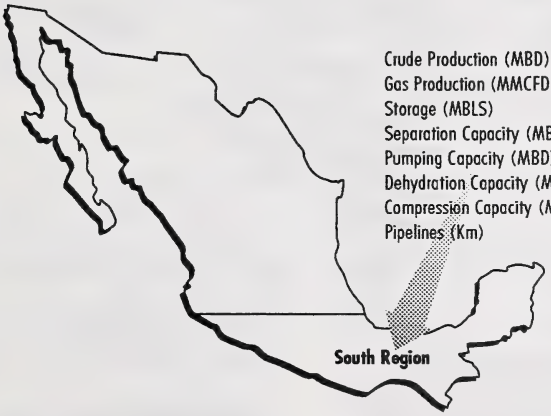
One area of opportunity for Alberta companies is the modernization of installations in the South. Although the **Southern Zone's** percentage of hydrocarbon reserves is relatively low in

Production System in the Northern Region



Crude Production (MBD)	96.3
Gas Production (MMCFD)	441.4
Storage (MBLS)	1,212.6
Separation Capacity (MBD)	1,059.4
Pumping Capacity (MBD)	4,894.0
Dehydration Capacity (MBD)	400.0
Compression Capacity (MMCFD)	1,042.0
Pipelines (Km)	13,443.0

Production System in the Southern Region

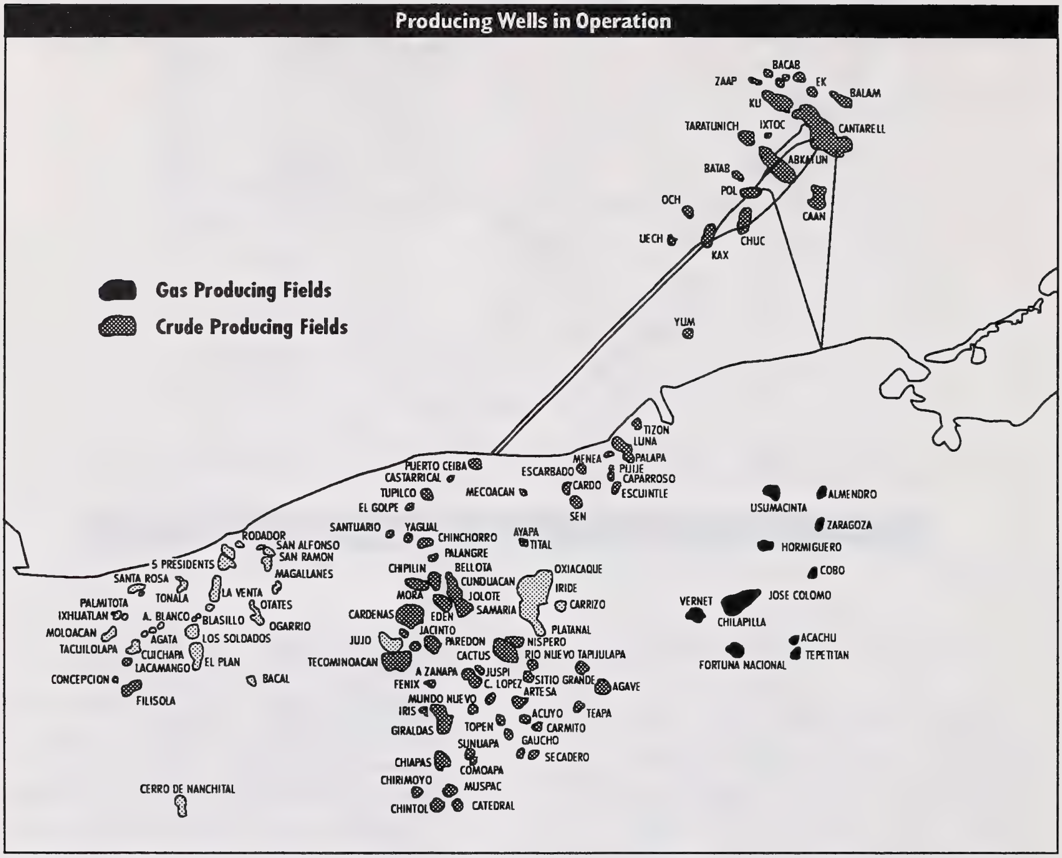


Crude Production (MBD)	625.3
Gas Production (MMCFD)	1,890.7
Storage (MBLS)	2,641.2
Separation Capacity (MBD)	2,945.7
Pumping Capacity (MBD)	1,346.0
Dehydration Capacity (MBD)	1,216.0
Compression Capacity (MMCFD)	3,325.0
Pipelines (Km)	9,593.0

comparison to the rest of the country, investment will continue to be high, because light and superlight crudes are concentrated in this area. Consequently, field development in the South will concentrate on exploration for light and superlight crude.

Planned projects include the implementation of mechanical pumping systems and the improvement of other artificial lift systems, as well as the application of secondary recovery methods.

The following is a map of producing fields in the **Southern and Marine Zones**.



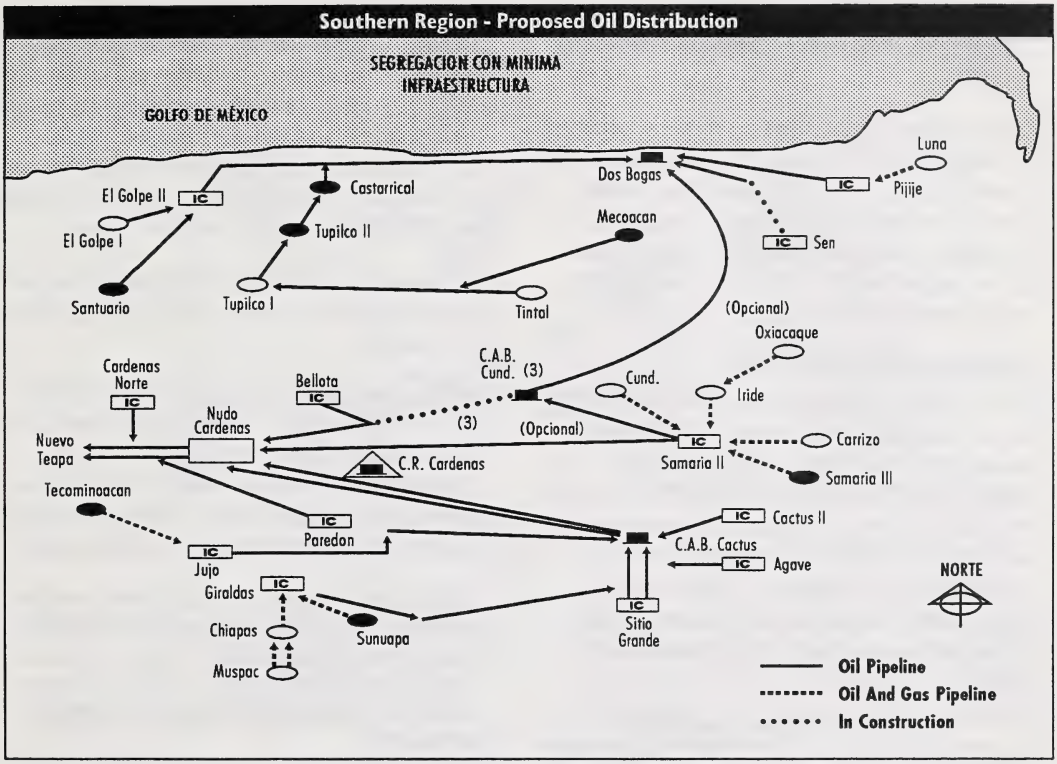
Producing Wells in Operation

Systems installed in the 1970s to accommodate new discoveries of oil were not well integrated. Typically, they were messy, superficial and prone to leaks and contamination by dirt and other particles. Recent discoveries of lighter crude in the South have been incorporated into the existing system, and the result has been inefficient, expensive and disastrous for the environment.

As a result, a modernization project called the **Olmeca Project** is planned for the Southern Region. The project will cost approximately $362 million US. Completion of the project has been set for the end of the year 2001.

The **Marine Zone,** now known as the Marine Northeast, incorporates the Cantarell, Ku-Zaap-Maloob and Ek-Balam platforms. The Southwest is comprised of the rest of the Gulf of Mexico to the south. In both regions, Pemex will continue programs to improve production. The development of Northeastern fields is focused on heavy crude and light crude is the focus in the Southwest.

Southern Region - Proposed Oil Distribution



The implantation of an electrocentrifugal pumping system has been planned for the Marine Zone in the Ku, Maloob and Ek-Balam platforms. Waterflooding is also planned for the Ek-Balam field. Investment for the Ek-Balam field project is estimated to be $294 million US over a period of two years.

In August 1996, the Cantarell platform entered a new phase of development. This phase includes the installation of an electrocentrifugal pumping system and the engineering required to augment the marine pipeline system to manage increased flows of gas and crude. Engineering of the project is expected to be completed by 1998.

PEP is planning to develop fields along the coast of Tabasco that are at shallow depths. This will require the construction of processing, storage and transportation systems, on-land and off-shore. The estimated cost of the **Tabasco Coast Project (Marine Southwest)** is around $525 million US.

Tabasco Coast Project: Estimated Costs

	$ Millions US
Peripheral marine platforms and marine pipelines	144
Central marine platform (separation, stabilization, compression)	92
Marine pipelines (from platform to land)	215
On-land treatment facilities	10
On-land pipelines	64
Total	525

Source: Petroleos Mexicanos

Engineering for this project is expected to begin at the end of 1996, with a completion date in the year 2002.

Atasta, located on land, is the reception point for gas produced in the Marine Zone. Increased quantities at current production rates, coupled with those expected in the future, require that the **Atasta Compressor Station** be modernized and expanded. A $60 million US investment has been planned for this station.

NATURAL GAS PRODUCTION

In 1995, natural gas production averaged 3,759 mmcfd, four per cent higher than the previous year in spite of adverse climatic conditions in the Marine Zone. The increase occurred because PEP began to increase production in non-associated gas fields and those with a high gas-oil ratio. This approach is intended to reduce import requirements over the medium to long term. (Import requirements for 1995 averaged 173 bcfd.)

Production of Natural Gas, 1995

By Type	
Associated	84%
Non-associated	16%
By Region	
North	14%
South	49%
Marine	37%

Total: 3,759 BCFD

Source: Petroleos Mexicanos

In May 1996, gas produced averaged 4,328 mmcfd.

Average Daily Production of Natural Gas, May 1996

Marine Zone Southwest	23%
Marine Zone Northeast	14%
South Zone	48%
North Zone	15%

Source: Petroleos Mexicanos

Immediate investment is planned for the areas of Reforma, Chiapas and Reynosa and Tamaulipas. In the Reynosa District, activities will focus on the Cuitláhac, Culebra and Mojarreñas fields, which correspond to the Cuenca de Burgos reserve. Incorporation of this non-associated gas reserve into the national production system increased gas production by 69 mmcfd over 1994 levels.

Investment in fields with a high gas-oil ratio will largely centre on the Muspac and Catedral fields in the South.

It is expected that production throughout 1996 will average between 3,600 to 4,000 mmcfd. Due to the already lagging investment in the production of natural gas and the recent disaster at the Cactus refinery, Mexico will become a net importer of gas by the year 1999, if not sooner.

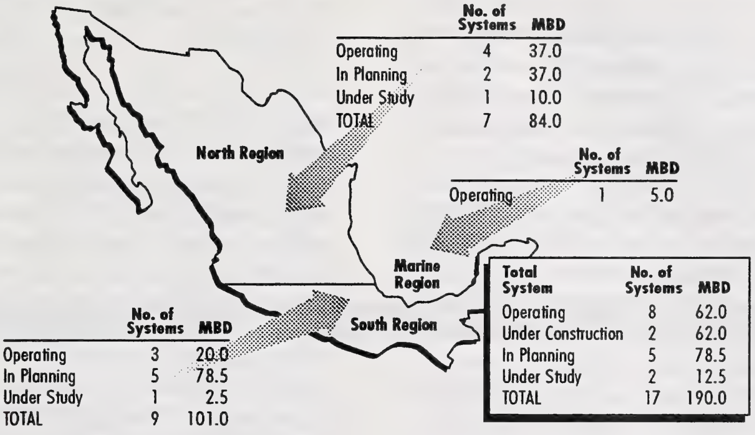
If PEP's basic budget plan is approved, natural gas production will increase to at least 5,500 mmcfd by the year 2002.

SAFETY PROGRAMS/ENVIRONMENTAL PROJECTS

Pemex is beginning to turn away from a crisis-management administrative style. This attitude is greatly assisted by the astronomical insurance costs of attending to problems as they occur, as opposed to protecting both the environment and personnel beforehand.

Pemex is devoting resources to increased security in plant operation and maintenance as well as leak detection and repair in pipelines, and efforts to protect the environment. Advances made in 1995 included increased supervision of high-risk works, and implantation of physical security systems such as vibration-sensitive alarm systems, walls and electronic fences, metal detectors at entrances, guard-posts and magnetic strip identity cards. On the environmental side, PEP undertook to control contaminating emissions and toxic discharges into soil and water. It installed

Waste Water Production



	No. of Systems	MBD
Operating	4	37.0
In Planning	2	37.0
Under Study	1	10.0
TOTAL	7	84.0

	No. of Systems	MBD
Operating	1	5.0

	No. of Systems	MBD
Operating	3	20.0
In Planning	5	78.5
Under Study	1	2.5
TOTAL	9	101.0

Total System	No. of Systems	MBD
Operating	8	62.0
Under Construction	2	62.0
In Planning	5	78.5
Under Study	2	12.5
TOTAL	17	190.0

desalinators in the Southern Region, restored 239 hectares of hydrocarbon-contaminated soils, tapped 175 leaks in various installations and recycled 3,385 tons of drilling muds.

PEP is urgently looking at the disposal of residual water produced along with crude. Mexico produces around 200,000 bpd of such water. Its eight water injection systems send water to storage wells or discharge it into the ocean after treatment. Several other systems for storing such water in storage wells are being analyzed. Desalination is also problematic, as refining and foreign purchasers demand a low water/salt to crude ratio, and penalties are high.

Fabricators of processing equipment who are able to offer new solutions to this costly problem are welcome to submit proposals. Because of Pemex's responsibility for financing the country's debt, resources for such investments are limited. In a case such as this, however, where the processed crude would eliminate international penalties and render a higher quality product, direct purchases are sometimes possible.

Companies that can offer other technologies to improve production or the quality of crude are sometimes able to sell directly if the technology can be proven to be "self-financing," or to have a limited payback period.

Efforts in these areas will continue to be a priority in 1996. PEP continues to conduct safety and environmental audits of its installations in hopes of being able to tackle what it admits is an enormous problem. Mexico is just beginning to develop an awareness of environmentally sound procedures and is trying to accomplish as much as it can on a very limited budget.

Alberta companies have much to offer Pemex in this area, but will have to help their Mexican clients understand the cost-effectiveness of prevention as well as sell them technologies to resolve their current problems. Pemex policy on the environment has yet to be clearly defined, however, and with pressure to keep production rates rising, PEP is unlikely to move towards greater emphasis in this area until more funds are made available.

REFINING

Refining processed an average of 1.282 million bpd in 1995, a six per cent decrease from 1994. This represents an operating capacity of 83 per cent. Sixty-seven billion tons/kilometre of crude and hydrocarbon products were transported through Refining's distribution system.

Refining is responsible for 31 per cent of Pemex's investment budget, or $647 million US. In 1995, its Ecological Package represented 62 per cent of total investment. This package is focused on the development of cleaner burning fuels. Other investment went to the completion of various plants (one MTBE plant and two isomerization facilities) to improve the quality of gasoline produced, and to advances in the storage and distribution system.

Refining is ambitiously planning to increase refining capacity from 1.338 milion bpd to 1.55 million bpd by the year 2000.

Further investment plans for 1996 include isomerization plants in Salina Cruz, Salamanca, Cd. Madero and Tula. A water treatment plant programmed for Salamanca will permit the reutilization of discharge waters in the refinery's cooling system. New storage and distribution facilities are planned for Guadalajara and Azapotzalco.

Refining is undertaking the Cadereyta Project, with a total investment of close to $1.2 billion US. This major project is intended to accommodate the increased demand for fuel in Mexico's north, taking into consideration new legislation pertaining to the environment. Eleven processing plants are to be built and nine existing plants will be expanded and modernized.

Investment dollars have also been assigned to the completion of a sweetening plant for residual products in Tula. This treater will have a capacity of 50,000 bpd.

Refining is completing a storage and distribution facility in Mexicali, Baja California, as well as a loading terminal and storage and distribution centre in Veracruz. Refining's pipeline budget will be spent on an eight inch gas and oil pipeline between Degollado and Zamora, and on increasing the capacity of a gas and oil pipeline from Minatitlan to Mexico by 75,000 bpd.

Areas of focus in the short term will be installation optimization, environmental protection, maintenance, industrial security, distribution and storage centres, and energy savings.

Industrial Security will emphasize vigilance. Refining is working with National Defence, the Federal Electric Commission and the National Water Commission to come up with a solution to a common problem in Mexico: theft of oil from the pipelines. In the North alone, 139 thefts of oil from pipelines were reported in 1995.

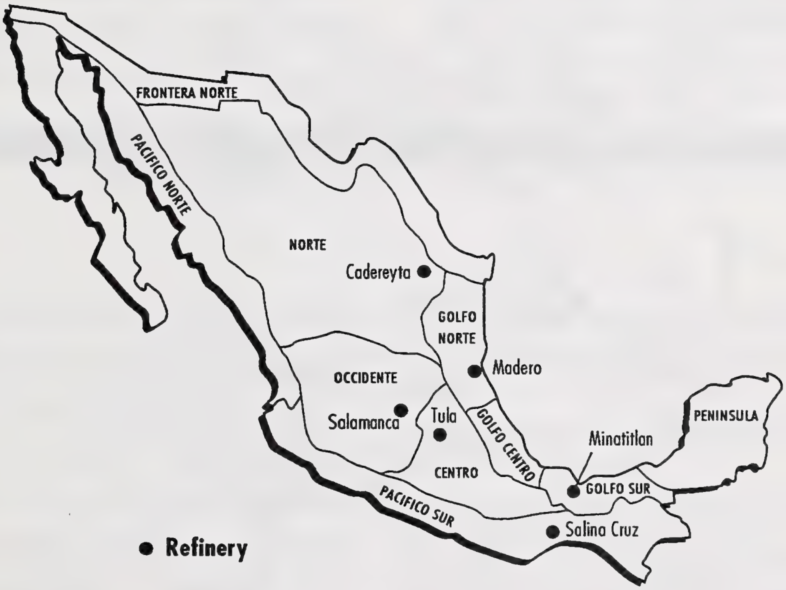
A total of 755 million pesos ($103 million US) has been assigned for the implementation of environmental programs over the next three years. These programs are expected to include environmental audits, soil remediation and recovery of hydrocarbons wherever possible.

Refining's budget is limited by the operating losses it has reported over the past few years. In 1995, it reported a before-tax loss of 693 million pesos, or $92.4 million US. Therefore, purchases have been minimal for the past few years. The reduction in car sales caused by the crisis coupled with the 45 per cent decrease in traffic on highways exacerbated Refining's already difficult situation. The institution raised its gasoline prices an average of 78 per cent along Mexico's northern border, and 81 per cent in the rest of the country.

The division experienced several complications during 1995 as a result of the devaluation of the peso. Contracts which were denominated in dollars or time and couldn't be modified had to be settled with the affected parties. Refining was forced to pay interest on its outstanding contracts.

Alberta companies working with Refining would do well to offer financing through the Economic Development Corporation (EDC) or prepare themselves for the possibility that payment may not be as prompt with this division as with others. Generally speaking, however, international contracts are settled sooner than those contracted within the country.

Pemex Refining Sales Network



PEMEX GAS AND BASIC PETROCHEMICALS

Pemex Gas and Basic Petrochemicals (PGBP), which is dedicated to the treatment, storage, distribution and sale of natural gas and basic petrochemicals (ethane, naphthas, pentanes and sulphur), is now comprised of four business units:

- Production
- Pipelines
- Natural Gas Marketing
- Liquid Gas and Basic Petrochemicals.

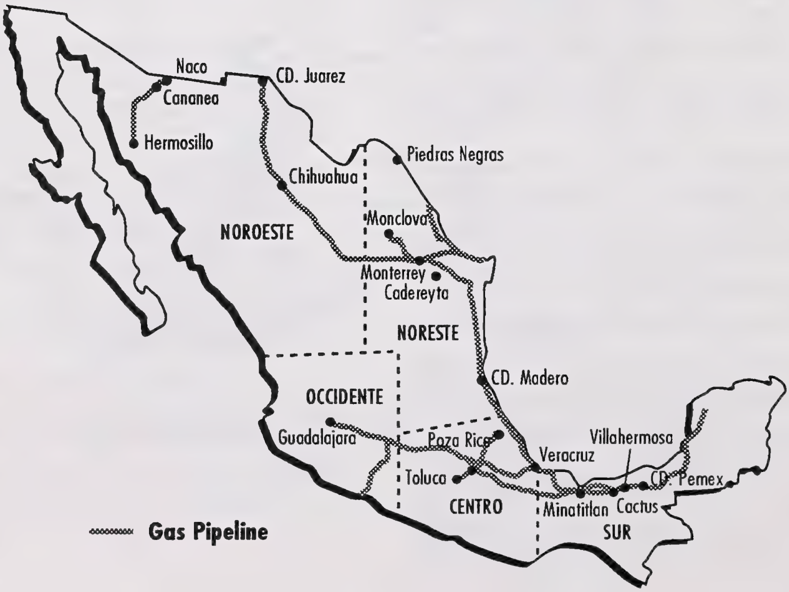
Mexico produces large quantities of natural gas and is just beginning to take advantage of its tremendous reserves. Prior to 1990, most associated gas was flared or wasted due to a low processing capacity, a lack of education about the benefits of natural gas and insufficient equipment to bring it into the processing system.

PGBP is responsible for managing seven petrochemical complexes:

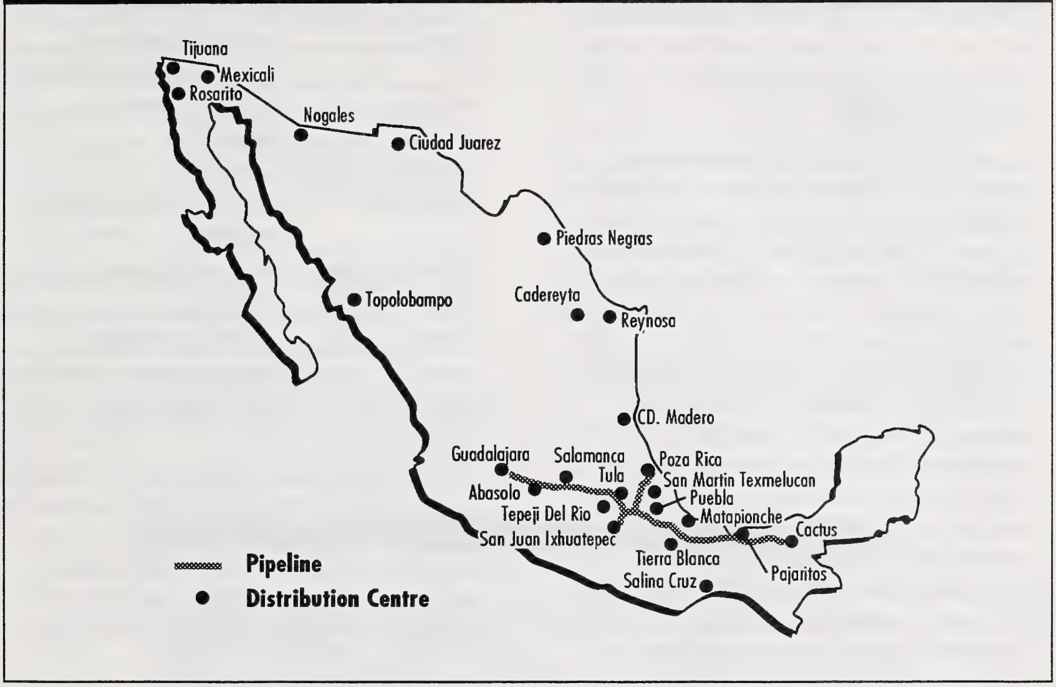
- C.P.Q. Cd. Pemex
- C.P.Q. Nuevo Pemex
- C.P.Q. Cactus
- C.P.Q. La Venta
- C.P.Q. Veracruz
- C.P.Q Poza Rica
- C.P.Q. Reynosa.

PGBP also manages liquid and ammoniac gas import and export centres, including the Salina Cruz Terminal (Oaxaca), the Pajaritos Terminal (Veracruz) and the Guaymas Terminal (Sonora).

Pemex Gas and Basic Petrochemicals - Regional Gas Sales



Pemex Gas and Basic Petrochemicals - Distribution of Liquid Gas



Pemex Gas and Petrochemicals runs the network for distributing ethane, propane, LPG (liquid propane gas) and natural gas, taking the products to centres controlled by Petrochemicals and to private distributors of gas for domestic use. To increase capacity in this area, PGBP has undertaken the construction of gas storage and distribution centres, including:

- Cd. Juarez, Chihuahua
- Topolobambo, Sinoloa
- Puebla, Puebla
- Guadalajara, Jalisco
- Rosarito, Baja California.

Puebla and Guadalajara will be called to bid towards the end of 1996. Each has an estimated budget of $5 million US.

Paradoxically, the Northern Region is richest in natural gas reserves but lacks the necessary infrastructure for production and distribution. Gas is currently imported from Texas through Cd. Juarez, Piedras Negras and Reynosa.

Private Participation with Pemex Gas and Basic Petrochemicals

Important changes to Mexico's constitution in 1995 allowed for advances in private participation with this division. Natural gas production in Mexico has become a priority. Its development, transport, storage and distribution are to be actualized to permit further sales of gas to the international market.

According to the new law *(Regulatory Law of Article 27 of the Constitution)*, both private and public sectors may own pipelines. Foreign participation will be also be possible in the storage, marketing, import and export of natural gas. Pemex Gas and Basic Petrochemicals will maintain ownership of pipelines currently in operation, as well as natural gas processing facilities. Four units were created last year to adjust PGBP's administration to the new policy of open competition.

The new law stipulates that transportation, storage and distribution systems should be open to private participation in a non-discriminatory manner. Vertical integration of operators in interconnected systems is strictly prohibited, except in situations where the vertical integration results in increased efficiency and greater ability to contract services, or when transportation infrastructure is nonexistent and no other company is interested in managing its development. Permits to carry out the activities of transportation, distribution, storage, and transport or storage for one's own use must be obtained from the Energy Regulatory Commission. They will have an initial duration of 30 years, renewable for periods of 15 years. A maximum price for natural gas will be fixed.

This move represents a major departure from traditional pipeline management. The fact that the Alberta oil industry was informed of the change by President Zedillo himself in Calgary symbolizes Pemex's entry into the next century.

Companies with permits are obliged by law to undertake certain security measures to ensure the quality of gas produced. The Energy Secretariat will establish required specifications. The federal government will not authorize new pipelines and will only authorize branches in cases where such an addition will increase the efficiency of the system in place.

The first round of bids was awarded in August 1996. The winner was a Mexican company, but a Canadian firm (Westcoast Energy Ltd.) was assigned a management contract for $7 million US.

Future Opportunities for Investment in the Distribution of Natural Gas

Zone	Area Under Consideration
Bajio	León, Salamanca, Celaya & Irapuato, Gto.
Mexico City	Mexico City & Surrounding Area
Cuernavaca	Cuernavaca, Mor.
Hermosillo	Hermosillo, Son.
La Laguna	Torreón,Coah, Gómez Palacio & Cd. Lerdo,Dgo.
Northeast Baja California	Tijuana, Rosarito, Ensenada, Tecate B.C.
Pachuca	Pachuca, Hgo.
Queretaro	Queretaro & San Juán del Río
Tampico	Tampico, Ciudad Madero, Altamira, Tams.
Toluca	Toluca & Surrounding Area

A consortium of producing companies in Alberta recently made a proposal to PGBP to increase the production and supply of gas in the Northern Region by taking advantage of the rich gas reserves found there. Pemex is analyzing the constitutional validity of this and other offers.

Future Projects

Pemex Gas and Basic Petrochemicals (PGBP) is geared toward increasing gas and condensate processing facilities over the medium term. Sweetening plants will be purchased to increase capacity by 72,000 bpd, fractionators by 104,000 bpd, and gas treatment plants by 500 mmcfd. It is expected that these investments will reduce distribution costs, satisfy national demands and allow for storage of natural gas at thermoelectric plants on the Yucatan peninsula.

During 1995, the division invested 738 million pesos ($98.4 million US), or 81 per cent of its budget. The crisis forced the cancellation of six projects and suspension of two, as well as delays in works that had been included in the 1995 portfolio.

The budget for 1996 is $181.5 million US. Of that amount, $34.5 million US has been assigned to environmental protection and industrial safety. Plans for this area include rehabilitation, maintenance and supervision of the national pipeline network, inspection and maintenance of pipeline equipment, upgrading of security systems in the cooling systems in Pajaritos and environmental projects.

Projects intended to improve PGBP's competitiveness on both a national and international scale have been assigned $19.2 million US. Most of these consist of implementing SCADA (Supervisory Control and Data Acquisition) systems in the State of Mexico, the Central Zone and the Monterrey pipeline network. Also planned is a 12" LPG pipeline between Minatitlan and Salina Cruz, a distance of 250 km.

Expansion of production capacity has been assigned $58 million US. Works planned include the integration of fractioning and cryogenic treatment plants and the purchase of a cryogenic plant of 500 mmcfd, a hydrocarbon fractioning plant of 104,000 bpd and three condensate sweetening and stabilizing plants of 24,000 bpd each.

Other projects approved for 1996 include system optimization, energy savings and reductions in transportation costs.

Future Projects – PGBP

Project	**Total Budget ($ Millions US)**	**Budget 1997 ($ Millions US)**
10" ethane pipeline, Coatzalcoalcos-Poza Rica (490 km)	60	18.5
24" gas pipeline, CPG Reynosa - Station No.2 (2.1 km)	2.23	2.23
Storage caverns for gas, Tuzandepetl, Veracruz	3.6	1
Maritime LPG storage & distribution terminal, Guaymas, Sonora	8	1.3
Automation of cryogenic system, Salina Cruz, Oaxaca	1.4	1.3
Supply of LPG via pipeline to distributors in Xalostoc & La Laguna	2.3	2.1
Optimization of electricity generation system and installation of eight reboilers in sweetening plants, Cactus	20.7	5.3
Compressor station in Ramones, Nuevo Leon	6.6	6.6
Refurbishing and reconditioning of Cardenas compressor station	2.2	2.2
Refurbishing and reconditioning of Chinameca compressor station	2.5	2.5
Refurbishing of 14" LPG pipeline in Salamanca, Guadalajara	3.5	3.5
Refurbishing of compressor station in Cempoala, Vera.	28.3	14.15
Refurbishing of 24" gas pipeline, Valtierrilla - Lazaro Cardenas	15.6	7.8
Expansion of cryogenic tank in Salina Cruz, Oaxaca	3.9	0.13

These plans may be interrupted, however. On July 26, 1996, an explosion in the Cactus complex in Reforma, Chiapas, 35 km from Villahermosa, Tabasco, destroyed equipment which processed one-third of the country's natural gas, or 1.4 billion cubic feet/day. Gas and Basic Petrochemicals will be placing as much of its budget as possible into the replacement and modernization of that refinery to bring it back into operation. Repairs to the facility will cost $240 million US, but the company will lose $2.75 million US daily until it does so. This setback is certain to affect investment plans over the next two years.

The explosion presents an opportunity for fabricators of processing equipment and engineering firms specializing in the implementation of safety programs. Pemex is now under tremendous pressure to improve working conditions in its installations and repair damage already done to the environment. As a government institution, it is somewhat subject to the demands of the populace and has the added incentive of extremely high insurance costs until it undertakes some of these measures. Unfortunately, the importance of paying the country's foreign debt with the currency produced by Pemex limits the investment dollars available for such improvements. It is for this reason that projects which can be self-financing are of such significance.

PETROCHEMICALS

Petrochemical Plants in Operation

Petrochemicals consumed eight per cent of Pemex's total investment during 1995. Investment programs that year were focused on increasing the productivity of processing plants, existing pipelines and other installations, and on maintenance.

Pemex is trying to privatize its petrochemical plants in an attempt to increase the country's processing capacity and reduce the necessary investment. The process has been difficult. The first bid basis (Cosoleacaque) was released in November 1995 and then cancelled in June 1996.

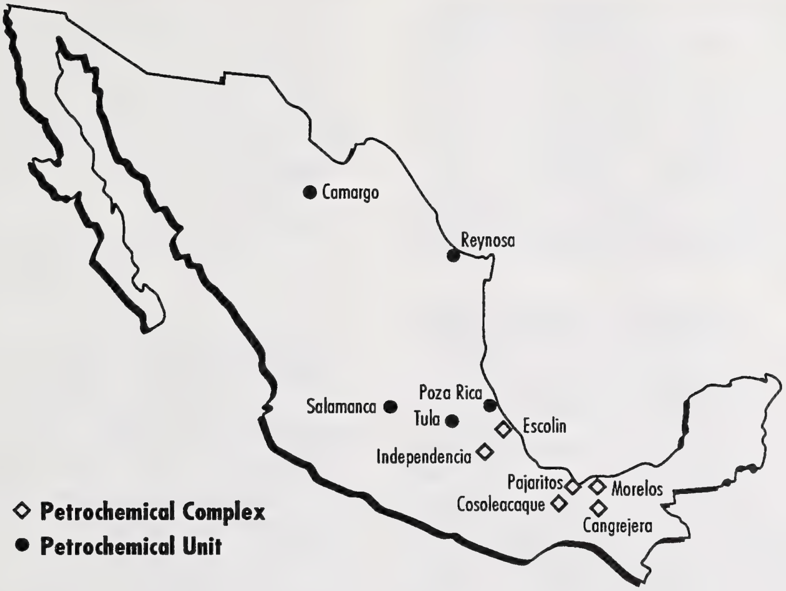
Advances were made, however. The disincorporation strategy was defined, and the Intersecretarial Disincorporation Commission was formed to oversee the process.

Pemex faces two problems with privatization.

Firstly, since the nationalization of the company in 1938, Mexicans have been encouraged to look upon petroleum as national patrimony that is not to be touched by foreign hands. Consequently, opposition to the sale is extremely strong and emotionally charged. Additionally, privatizations carried out during the previous administration occurred under mysterious circumstances, allowing the number of billionaires in the country to leap from four to 24 in just six years. Resultant scandals have increased local skepticism about the privatization process.

Secondly, according to the constitution, most facilities are constructed on lands belonging to the people of Mexico, thus rendering their sale illegal. President Zedillo, already lacking in significant support within the country, will have to find a solution to the constitutional issue which won't result in a civil uprising.

Petrochemical Plants in Operation



Privatizations have been rescheduled for 1997. In the meantime, the Price Committee of Petroleum By-products, Natural Gas and Petrochemicals has approved a series of regulations to bring about reforms in the distribution of these products and in contractual relations. Development in this area will be slow and not well publicized.

The next plants to be sold are La Cangrejera, Morelos and Pajaritos, among others.

NOW WHAT?
DOING BUSINESS WITH PEMEX

CHOOSING A PARTNER

Canadian companies in Mexico have two distinct disadvantages in competing with Mexican companies. Firstly, staff usually don't speak the language, and secondly, they don't know the system. It is therefore best for Canadians to find a partner or representative to guide them through such uncharted waters as Pemex mega-projects. Pemex officials are likely to be more receptive to someone they have had a history with or with whom they can at least carry on a fluent conversation.

A good first step is to ask Alberta Economic Development and Tourism for a list of Mexican agents and consultants. Lists are also available through the Canadian Embassy and the Canadian Chamber of Commerce in Mexico. A few phone calls will determine who a) speaks English reasonably well, and b) returns phone calls.

It is a good idea to make appointments to interview potential agents/partners at their offices, even though the prospect of navigating Mexico City can be daunting. Major hotels can arrange a car and bilingual driver at a fairly reasonable cost by Canadian standards, and the investment is well worth the expense. The potential partner's office will tell a lot about their quality and the amount of business they are accustomed to handling.

Medium-sized Canadian companies will want to work with fairly large Mexican firms. However, although major contractors have well known reputations and are easy to investigate, their sheer size and market presence will probably be too much for a medium-sized company to handle. It would be better for such firms to look towards smaller, lesser-known Mexican companies who have many years of experience in dealing with Pemex but also welcome the opportunity to represent new products or services. Such companies are less likely to have shady histories or political complications.

All potential agents or partners will claim to have sterling-clad connections to Pemex. The only way to determine whether or not their claims are true is to ask Pemex. A translator can help to arrange a meeting with the appropriate people. This is an opportunity to ask questions, and to present products or services and leave catalogues or videos. Pemex officials can indicate the companies they know and feel comfortable with.

RESEARCHING A PROJECT

Larger Canadian firms usually go into foreign markets when they hear of projects they may be able to work on or supply with equipment. Pemex has many such projects in the works, several of which have floated around as rumours over a number of years. It is therefore important to verify how long the project has been planned and to trace its history by talking to Pemex directly. Since managers of projects employ younger engineers to work out the fine details companies should ensure that they will be speaking to the technical engineer in charge who knows the project's history, when it is expected to come to fruition and what the expectations of cost recovery are etc. If project managers know who is interested and they also are interested, they will get in touch, even if contact has been limited to a few phone calls each year.

If it appears that a project is set to come out in the short term, it is important to make a lot of contacts. If it is a major undertaking for Pemex, Canadian companies should visit managers and subdirectors in charge at the Pemex tower in Mexico City, as well as those in the field. Time limits are usually very short for bid preparation. If Pemex staff are convinced that a Canadian company has the state of the art equipment they need, or that its services are the most efficient and cost-effective, they will provide as much information as they can to ensure success. If, however, their contact with a company has been limited to a few catalogues left by associates, they are unlikely to be as forthcoming with details.

Either way, it is important to register with Pemex in Mexico City as well as the region in which the bid is going to come out, in order to facilitate participation in the bidding process. A Supplier's Number will be provided to each company and this must be included in the bid presentation. Registration is now done on diskette and submitted along with company information and letters of representation to the appropriate offices.

The General Secretariat of the Controller's Office and Administrative Development (SECODAM) now has a service on the internet called "Compranet." This electronic purchasing system publishes national public bids, including those at Pemex, on the internet. Their address is http://rtn.net.mx//compranet

PREPARING A BID

Bid solicitations are published in national newspapers and usually have a cost of between 500 and 2500 pesos. They must be paid for by certified cheque in Mexican currency and usually in person. Bid solicitations are either national or international. Unless a Canadian company has a Mexican subsidiary, it will be able to participate directly only in international bidding.

Even if a Canadian company chooses to have a Mexican associate prepare the bid for them, it is a good idea to purchase the documents directly as well. If the associate suffers some unforeseen mishap during the bidding process, a company will be unable to participate unless it has also purchased documents in the company name. Translating the documents will also give the company an opportunity to closely monitor a partner's progress during the bid preparation.

Companies that prefer to prepare the documents themselves should contract a Spanish speaking engineer to assist. All offers must be presented in Spanish and in the format which is provided in the bid basis.

Equipment may be priced in US currency, but any services will have to be quoted in Mexican pesos. In this case it is best to consult a trading house to see what they predict will happen to the peso between the presentation of the bid and the expected payment date. In this way, Canadian companies can make an accurate quote and have some protection against sudden drops in the Mexican currency.

A clarification meeting is always held to answer questions about the bid basis. Attendance is not mandatory, but it is a good idea to be there. This will be a first opportunity to know for certain who the competitors are and to see the quality of their representation in Mexico. It also demonstrates to the Pemex officials an interest in complying with more than the obligatory portions of the bid preparation. Furthermore, any agreements or adjustments made during the clarification meeting regarding details of delivery or substitutions of parts are legally binding and will form part of the contract with the successful bidder.

Optional site visits are often arranged around the clarification meeting. If research has been properly done, the bidder will already be familiar with the site. Still, it is a good idea to attend in order to evaluate the competition.

It is extremely important to comply with all requests for documentation and to place it in the order and format in which it is requested. Any departure from the official format can be grounds for disqualification. Many of the items can be sources of irritation for foreign companies unaccustomed to the procedure, but it is easiest for all concerned to indulge the bureaucracy without analyzing the logic behind the request. Mexico is a foreign country and much of the information requested is there for the protection of bidders.

Offers are presented in two packages: Technical and Commercial. Often opened on different days, they are almost always presented together at the same hour. Offers are sealed when they are presented. Pemex tapes the envelopes together and asks all present to sign each side.

The Technical offer will include legal documentation as well as a history of the bidding company for example, audited financial statements, tax returns, company incorporation documents and charter, letters of representation for both the employee operating on behalf of the firm and the Mexican associate, domestic and overseas sales over the past six months, and letters pertaining to articles in the Mexican constitution. (Formats are included in the bid package.) All of this will have to be translated into Spanish, notarized and then sealed by the nearest Mexican consulate.

It is important to avoid the use of the term "or similar" in an offer. Substitute parts or components in a product could cause Pemex to delay approval upon delivery. Bidders must make certain that what is quoted is what can be provided, within the delivery term stated.

Most of the above-mentioned documents are requested when a company registers with Pemex. A letter of registration then renders the rest of the information unnecessary. Following this procedure often helps to avoid the last minute scramble of getting everything together.

The Commercial offer must be supported with a bid bond worth five per cent of the quote. This bond must be prepared by a Mexican insurance company. The simplest method is to have a bank link with a Mexican company and forward a letter of credit to them. Companies whose bid bonds are unacceptable to Pemex are listed in the bid package. There are many consulting companies in Mexico who are dedicated exclusively to the acquisition of bid bonds. Since they can be of great assistance, companies should make their acquaintance during preliminary visits to Mexico. Consulting companies can greatly speed up the procedure and are easier to deal with than the insurance companies themselves.

IMPLICATIONS OF A CONTRACT

Contractual obligations with Pemex begin in the clarification meeting. Unless there is a statement of non-conformance with agreements made on that date, companies will be obliged to comply with them in their contract with Pemex. Similarly, companies will be unable to change any aspect of their offer without prior consent from Pemex. The contract is actually a summary of the clarification meeting and the company's commercial and technical offers. Negotiation does not generally occur after awards have been made.

GOVERNING ENTITIES IN CASE OF DISPUTE

The internal controller's office of Pemex is the first organization to appeal to in case of a dispute. The next level of appeal is a separate government organization, the National Controller's Office.

Since petroleum and its by-products belong to the United States of Mexico, contracts executed with Pemex fall under national jurisdiction. Failing resolution with the National Controller's office, contract disputes must be settled in Mexican courts according to the Federal Civil Procedures Codes.

Disputes with partners or representatives, however, may go to arbitration according to international conventions.

Note: For more details, refer to the summary of commercial regulations between Pemex and its suppliers at the end of this report.

SOURCES OF ASSISTANCE FOR ALBERTA COMPANIES

Canadian Governmental Organizations

Alberta Economic Development and Tourism
Export Development
4th Floor, Commerce Place
10155 - 102 Street
Edmonton, Alberta, Canada T5J 4L6
Tel: (403) 427-6239
Fax: (403) 427-1700
E-mail: lanedou@censsw.gov.ab.ca

Alberta Chamber of Commerce Mexico Trade Office
Mr. Kenneth Emmond
CONCANCO-SERVYTUR
Balderas 1444, 4e Piso
México, D.F. México 06079
Tel: (525) 709-6055
Fax: (525) 709-0058

Canadian Embassy in Mexico
Commercial Section
Schiller No. 529
Col. Polanco
11560 México, D.F. México
Tel: (525) 724-7900
Fax: (525) 724-7982

Canadian Chamber of Commerce in Mexico
Paseo de la Reforma 369, Mezzanine
Col. Cuahtémoc 06500
México, D.F. México
Tel: (525) 729-9903
Fax: (525) 729-9903 Ext. 2116

Private Firms and Consultants

MEXICO

Lorena A. Patterson
Oil and Gas Specialist
Presidente Masaryk 61 - 101
Col. Chapultepec Morales
México, D.F. México 11570
Tel: (525) 254-2616
Fax: (525) 254-2743

INFOMEX
John Price, President
Nuevo León 230-203
Col. Hipódromo-Condesa,
México, D.F. México 06140
Tel: (525) 264-0521
Fax: (525) 264-1355

STRATEC Consultants International
Graeme Bromley, Director General
Miguel Angel de Quevedo 985-B 202
Coyoacan
México, D.F. México 04030
Tel: (525) 544-0817
Fax: (525) 689-9985

ALBERTA

Americas Trading Corporation
H. Neil Bowker, President
Suite 2260, Tower One
10060 Jasper Avenue
Edmonton, Alberta, Canada T5J 3R8
Tel: (403) 424-4240
Fax: (403) 426-0161

Canadian Overseas Trade Corporation
Mr. Erv Lack, Principal
502 Metropolitan Place
10303 Jasper Avenue
Edmonton, Alberta, Canada T5J 3N6
Tel: (403) 420-1333
Fax: (403) 424-3091

Latin America Trade Link Corp.
Brian Westlund
12 Grandville Place
St. Albert, Alberta, Canada T8N OT2
Tel: (403) 458-3312
Fax: (403) 458-3318

MCC Joint Ventures Canada/International Inc.
Cristina Castro, President
147 Edgview Drive N.W.
Calgary, Alberta, Canada T3A 4X2
Tel: (403) 239-5070
Fax: (403) 547-0843

Mexilink Marketing
Roger Kavaner, Principal
#4 10030 Oakmoor Way S.W.
Calgary, Alberta, Canada T2V 4S8
Tel: (403) 238-2262
Fax: (403) 238-5634

North-South Trade & Investment ltd.
Lisa Davis
11930 - 100 Avenue
Edmonton, Alberta, Canada T5K 0K5
Tel: (403) 482-6066
Fax: (403) 482-5939

ONTRAC Development Consultants
Bob Clark, Senior Partner
#120, 634 - 6th Avenue S.W.
Calgary, Alberta, Canada T2P 0S4
Tel: (403) 264-5884
Fax: (403) 264-5698

Prime Source International
Richard Badger, President
2310 - 16A Street S.W.
Calgary, Alberta, Canada T2T 4K4
Tel: (403) 229-2543
Fax: (403) 229-2450

Teulu Group
Brad Davis
2224 Kelwood Drive S.W.
Calgary, Alberta, Canada T3E 3Z6
Tel: (403) 246-1728
Fax: (403) 240-9147

WESTDEV International Business Development
Rob Wilcox, Project Director
#1010, 1122 - 4th Street S.W.
Calgary, Alberta, Canada T5M 3S5
Tel: (403) 234-0522
Fax: (403) 265-9823

Wilson International Trade Consultants Inc.
Bruce Wilson, President
9735 - 42 Avenue
Edmonton, Alberta, Canada T6E 5P8
Tel: (403) 462-1238
Fax: (403) 462-9150

Canadian Sources of Financing

Pemex has a number of lines of credit around the world. Amounts used in 1995 include:
Fuji Bank - $20 million US
Chase Manhattan Bank - $70 million US
Latin American Export Bank - $25 million US
Deutsche Bank - $117 million US
Banque Europeene pour L'Amerique Latine - US$41 million
Société Générale - $33 million US
Kreditanstalt Für Wiederaufb - $16 million US
Export Development Corporation - $3 million US
Westlb - $19 million US

Financing for Alberta companies doing business with Petroleos Mexicanos may be arranged through a number of agencies. Below is a brief listing of some options. It would be best for companies interested in pursuing financing to consult their Canadian bank. Most Canadian banks now have offices in Mexico and have access to a number of lines of credit.

Canadian International Development Agency
Industrial Cooperation Division
200, Promenade du Portage
Hull, Quebec K1A 0G4
Tel: (819) 997-7905
Fax: (819) 953-5024

Economic Development Corporation
510 - 5th Street S.W.
Suite 1030
Calgary, Alberta T2P 3S2
Tel: (403) 292 - 6520
In Alberta call toll free 1-800-661-8638
Fax: (403) 292-6902

Western Economic Diversification
Canada Place, Suite 1500
9700 Jasper Avenue
Edmonton, Alberta T5J 4H7
Tel: (403) 495-4164
Fax: (403) 495-7725

DFAIT (International Finance Division)
Department of Foreign Affairs and International Trade
Tel: (613) 995-7251
Fax: (613) 943-1100

Mexican Governmental Organizations and Financing Sources

Secretariat of Investment and Industrial Commerce
Secretaría de Fomento y Comercio Industrial (SECOFI)
Alfonso Reyes No. 30, Col. Hipodromo Condesa
México D.F. 06170 México
Tel: 525-286-0126
Fax: 525-286-1483

External Affairs
Secretaría de Relaciones Exteriores
Ricardo Flores Magon, Tlatelolco
México, D.F. México
Tel: 525-782-3983
Fax: 525-782-3984

Immigration
Secretaría de Gobernación
Bucareli 99, Col. Centro
México D.F. 06600 México
Tel: 525-535-6176
Fax: 525-592-1141

Mexican Customs
Dirección General de Aduanas
Aeropuerto Internacional Cd. De México
México D.F. 15620 México
Tel: 525-571-0927
Fax: 525-542-0003

Energy Secretariat
Secretaría de Energía
Av. Insurgentes Sur 552
Col. Roma, México D.F.
06760 México
Tel: 525-564-8000

Mexican Sources of Financing:
Banco Nacional de Comercio Exterior S.N.C.
(Bancomext)
Camino A Sta. Teresa 1679
Col. Pedregal de San Angel
México D.F:, Mexico
Tel: 525-327-6000

Nacional Financiera (NAFINSA)
Av. Insurgentes Sur 1971, Torre 4, Piso 13
Col. Guadalupe Inn
México, D.F. México 01020
Tel: 525-325-6000

Canadian Banks in Mexico

Bank of Montreal
Horacio 1855 - #301 - A
Col. Polanco, México D.F.
11510, México
Tel: (525) 203-8211
Fax: (525) 203-8542

Bank of Nova Scotia
Hamburgo 213 - Piso 10
Col. Juárez, México D.F.
06600, México
Tel: (525) 256-0622
Fax: (525) 511-1300

Canadian Imperial Bank of Commerce
Campos Eliseos 400-402A
Col. Polanco, México D.F.
11560, México
Tel: (525) 281-1074
Fax: (525) 280-3069

National Bank of Canada
Lope de Vega 117 Piso 10
Col. Polanco, México D.F.
11570 México
Tel: (525) 254-7030
Fax: (525) 531-6930

Royal Bank of Canada
Hamburgo 172 - Piso 10
Col. Juarez, México D.F.
06600 México
Tel: 525-207-2252
Fax: 525-208-1592

Toronto Dominion Bank
Paseo de la Reforma 389 Piso 15
Col. Cuauhtémoc, México D.F.
06500 México
Tel: 525-207-3816
Fax: 525-207-3836

Accounting Firms

Price Waterhouse
Rio de la Plata 48, Pisos 1 - 3
Col. Cuautemoc, México D.F.
06500 México
Tel: 525-722-1700
Fax: 525-286-6248

Ruiz Urquiza Y Cía S.C. (Arthur Anderson)
Bosques de Duraznos 127,
Bosques de las Lomas, México D.F.
11700 México
Tel: 525-251-9457
Fax: 525-326-8969

KPMG Cardenas Dosal S.C.
Bosques de Duraznos 55 PB,
Col. Bosques de las Lomas, México D.F.
11700, México
Tel: 525-251-8046
Fax: 525-251-8476

Deloitte Touche Tohmatsu International
Jaime Balmes 11, Ed. B, Piso 1
Col. Los Morales, Del. Miguel Hidalgo
México D.F. 11510, México
Tel: 525-280-9255
Fax: 525-280-9422

Coopers & Lybrand
Despacho Roberto Casas Alatriste S.C.
Durango 81, Col. Roma, México D.F.
06700 México
Tel: 525-229-8100
Fax: 525-229-8101

Customs Brokers

Central de Aduanas de México S.A.
Sinaloa 14, Peñon de los Baños
México D.F. 15520 México
Tel: 525-785-4755
Fax: 525-785-5306

Agencia Guilleremo Woodward Rojas
Av. Teniente Azueta No. 25 - 1
Manzanillo, Colima, México
Tel: 523-332-1014
Fax: 523-332-1378

Note: This agency would be the most suitable for firms wishing to ship from Vancouver to Mexico via ocean freight.

Agente Aduanal Felix Palazuelos G.
Entronque Av. 602 Col. Peñon de los Baños
Del. Venustiano Carranza, México D.F.
15520, México
Tel: 525-571-8199
Fax: 525-785-3534

Arturo Pacheco G.
Blvd. Puerto Aereo No. 10
Col. Montezuma 2a Secc.
México D.F. 15510, México
Tel: 525-785-8611
Fax: 525-785.-8611

Freight Forwarders

Servicio del Angel
Tel: 525-618-9689
Fax: 525-618-0854

Fletes Mancera
Tel: 525-392-1233
Fax: 525-388-3955

Fletes Modernos S.A. de C.V.
Tel: 525-754-2604
Fax: 525-754-1276

Fletes Y Mudanzas Casa BCA
Tel: 525-428-3690
Fax: 525-612-6883

Transportes Santa Martha
Tel: 525-793-0611
Fax: 525-7907-4659

SUMMARY OF COMMERCIAL REGULATIONS BETWEEN PEMEX AND SUPPLIERS

The following is a translated version of the laws governing commercial relations between Petroleos Mexicanos and its suppliers. This outline of the rights and obligations of companies selling to Pemex or its divisions should be read carefully by any firm submitting proposals to or bidding on projects with the national oil company.

Governing Laws:

- Article 134 of the Political Constitution of the United Mexican States.
- North American Free Trade Agreement
- Federal Law of Parastatal Entities and Its Articles
- Law of Purchasing and Public Works
- Regulations of the Law of Purchases, Rentals, and Services Pertaining to Real Estate
- Law of Budgeting, Accounting, and Federal Public Expenditure and Its Articles
- Organic Law of Petroleos Mexicanos and Subsidiary Organizations
- Rules of the Organic Law of Petroleos Mexicanos

Objective

To clearly establish the basis according to which Petroleos Mexicanos (Pemex) and its subsidiary organizations will conduct commercial relations with suppliers.

To improve the quality of commercial relations between Pemex and its suppliers.

To achieve an exact complement to the Law of Purchasing and Public Works, and the North American Free Trade Agreement.

Scope of Application

These regulations are obligatory for Pemex and its Subsidiary Organizations, as well as its suppliers of goods and services, on contracts realized within National Territory as well as without.

1. The Scope of These Laws

1.1 In conformance with the Law of Purchasing and Public Works, these regulations will be applied to the purchase, rental, and contracting of services relating to the acquisition of goods.

1.2 The purpose of these regulations is to define in detail the contractual relationship mentioned above specifically in the case of commercial relations between Pemex and its suppliers.

1.3 Any addition, change, or modification to these regulations will be carried out by the Mixed Consultative Commission of Suppliers to Pemex by direct communication to said suppliers.

2. The Suppliers' Directory of Petroleos Mexicanos and Subsidiary Organizations

2.1 Companies and persons who provide goods and services to Pemex may register in the Institutional Supplier's Directory. This registration is a method of simplifying internal administration, intended to increase efficiency in purchasing. Failure to register in said Directory will not result in the disqualification of suppliers in public bids or invitations.

Pemex is currently developing the necessary infrastructure such that every supplier who demonstrates registration and annual updating of their information in the Directory is exempt during the period in which it is in force from having to present the same information again in public bids and tenders, in any of Pemex's purchasing divisions.

3. Calls for Bids and Public Tenders

3.1 Pemex, through its purchasing divisions, will record public tenders from the date of its publication to the awarding of the bid, in accordance with the Law of Purchasing and Public Works.

3.2 The development of the bid basis will be carried out within the organization, so that it may be used by all areas of purchasing in the State Petroleum

Industry. Bid basis may be subject to change according to the requirements of a particular purchase or service contracted.

Conditions outlined in the Public Tender Basis will be the same for all suppliers participating. All will be treated equally and without discrimination, with the exception of those who fall into categories outlined in the last paragraph of Article 31 in the Law of Purchasing and Public Works.

3.3 In order to simplify the process, Pemex may allow that participants who have obtained their "Reliable Suppliers' Certificate" will not have to disclose in their offer documentation or proof or the number of units or equipment they have sold, or be subject to quality assurance inspections of their products.

3.3.1 In the Bid basis for the purchase of goods, Pemex may require participants to comply with quality assurance certificates such as ASME, ISO 9001, 9002, and others.

3.4 In all tenders, participants will have to comply with all requirements listed in the basis, in order to prove their experience, technical and financial capacity, and any other qualification necessary to ensure that Pemex enters into contracts in the best terms and conditions possible.

3.5 With respect to the above, purchasing areas will be responsible for the reliability of each supplier, and will be partially responsible for compliance or breaches of contract with their suppliers.

In all cases, the supplier may consult the Pemex compliance register of the division to which it is selling, to analyse results of previous commercial transactions it has undertaken.

3.6 Cancellation of Public Tender Proceedings

In cases where public tender proceedings are cancelled, due to public order or contravention of the law, by order of the Controlling Secretariat of the Federation, participants will be refunded for non-recoverable expenses that they may have incurred, as long as said expenses are reasonable and documented.

These concepts should be mentioned in the bid basis and will include as a minimum the following:
- cost of bid basis
- cost of bid bonds
- costs of bid preparation, when this implies the contracting of professional services for bid quotation.

4. Contracts

4.1 Purchasing of Goods

4.1.1 In contracts for the purchase of goods, in addition to information pertaining to the product and its supplier, the following items should be detailed:

4.1.1.1 Period of delivery.

4.1.1.2 Place or places and terms of delivery.

4.1.1.3 Whether a warranty is required and what type.

4.1.1.4 Indication as to whether materials or equipment will require inspection, and at what level.

4.1.1.5 Indication as to whether or not partial delivery will be accepted.

4.1.1.6 Terms of payment (down-payments, advances, instalments, final payment, etc.).

4.1.1.7 Price conditions, which will include one of the following:

a) Fixed price

b) Price subject to adjustment according to generic formula

c) Price subject to change according to the application of a price index

d) Price subject to change according to variation in official prices.

4.1.1.8 Should the purchaser be required to provide materials or equipment, they should be specified, as well as the period during which they will be made available.

4.1.1.9 Should the purchaser need to provide specifications or plans, they should be referred to explicitly, as well as the term in which they must be provided.

4.1.1.10 Should the purchaser require that the supplier send plans or specs for approval, the length of time available to do so must be indicated, as well as the purchaser's period for approval.

4.1.1.11 The period during which the warranty for each product will be in force must be detailed.

4.2 Terms of delivery for goods must be detailed (see section 8 below).

4.3 The contract must specify necessary conditions to ensure the correct operating and functioning of equipment, including those which affect its insurance.

4.4 In accordance with the bid basis, the period during which the supplier is obliged to supply spare parts and, if required, the manner and terms in which training of equipment operators will be carried out.

4.5 When a supplement or modification is made to the purchase contract, it will only contain conditions subject to change. All other conditions will remain in effect.

4.6 In general, technical characteristics, the scope of the purchase, and other general conditions which are detailed in the contract or supplements to the same, should contain information corresponding to the offer of the supplier or clarification notes approved by the purchaser.

In cases where the volume and corresponding detail render their incorporation into the contract impractical, the purchaser may refer by number and date to the supplier's offer, as well as clarification notes. These should be referred to by both the supplier and the purchaser for complete interpretation of the contract. Only notes which do not affect the nature of the supplier's offer will be binding.

For this reason it is imperative that suppliers quote all technical specifications and characteristics of their products, indicate brand names, and avoid the use of the term "or similar."

4.7 Any change to the contracts, agreed to by both parties, should be communicated to the purchaser in writing, and confirmed by the development of a contract supplement, which will be delivered in a period of no more than 20 calendar days. Should the supplier not receive the supplement, the written communication will remain in force for whatever procedure is required.

5. Changes to or Clarifications of Contracts

5.1 The supplier may provide the purchasing division with a written request to change or clarify the contract within five working days of contract signature in cases of spelling errors or omissions which affect the original offer. Such requests will not imply the cancellation of the offer.

Should no request be submitted within the aforementioned period, the contract will be considered to have been duly accepted.

Should the purchasing division reject without reason the requested change or modification, the supplier may appeal to the internal controlling division, in order that they review the case. The supplier may also, without prejudice, appeal to the Controlling Secretariat of the Federation according to the terms and conditions outlined in the Law of Purchasing and Public Works.

5.2 Pemex will be allowed five working days from the date on which they are received to respond to requests to change or clarify contracts. This will not affect delivery dates agreed to in the contract, as proposed modifications cannot affect the terms of the original offer.

5.3 The successful bidder should abstain from trying to change specifications, terms of delivery, and/or conditions established in their offer. Such attempts are contrary to Article 33, sec.V and Article 35, last paragraph of the Law of Purchasing and Public Works.

5.4 Should Pemex need to increase the terms of a contracted purchase, purchasing divisions may alter the contract within six months of its signing, up to 15 per cent more of the volumes originally contracted, as long as the supplier maintains original prices and the contract is still binding.

6. Terms of Delivery

6.1 Delivery period of materials or equipment will begin on the date of signature of the original contract.

6.2 Conditions under which delivery periods may be modified:

6.2.1 Delays in payment of advances or instalments. Payment periods will be defined in accordance with points 13.2.1 and 13.3.5 from the date of the supplier's request, as long as it complies with stipulations mentioned in sections 12 and 13 below.

6.2.2 Delays in the delivery of plans, drawings, or specs on the part of Pemex.

6.2.3 Delay by Pemex in the approval of drawings, plans, or specs.

6.2.4 Delay in the delivery of materials or equipment supplied by Pemex.

6.2.5 Unforeseen conditions outlined in section 10 below.

6.2.6 Delay by Pemex in the completion of works agreed upon for the reception and/or installation of goods.

6.2.7 When new delivery dates must be fixed due to Pemex requirements, the new date will be agreed to by the supplier and will be confirmed by means of a contract supplement.

6.2.8 For deliveries marked F.O.B. plant, or F.O.B. plant with freight paid at site, delays in the inspection visit, as long as the equipment passes said inspection. The date of the supplier's request for inspection will be considered as delivery, for purposes of determining contract compliance.

6.2.9 For deliveries marked F.O.B. site which require plant inspection, calculation of delivery term will be determined by deducting from the actual delivery date the difference between the date of the supplier's request for inspection and the date on which it was carried out (assuming it was satisfactory), as long as a difference of more than seven calendar days has passed.

6.2.10 In the case of partial delivery, the previous point will be applied for each of the deliveries, according to the conditions agreed upon in the contract.

7. Delivery of Contracted Goods

7.1 When materials or goods require a satisfactory inspection, the supplier will request in writing in the agreed-upon format. The request must be stamped and dated upon reception.

For deliveries marked F.O.B. plant, or F.O.B. plant with freight paid to site, where inspection is satisfactory, the date the request is received will be considered as delivery date in the determination of contract compliance, whether or not the actual delivery is carried out at a later date.

7.2 When materials do not require inspection, the delivery date will be:

7.2.1 The date of receipt of the request for transport, in the case of F.O.B. plant.

7.2.2 The date of the expedited waybill, in the case of F.O.B. plant with freight paid to site.

7.2.3 The date of reception at the warehouse, in the case of F.O.B. site warehouse.

8. Delivery Terms

The delivery terms should be included in both the quote and the contract.

8.1 Delivery terms usually comply with but are not limited to the following:

8.1.1 The condition *EX-FABRICA* means that delivery does not include shipping and handling and that the good be delivered at the supplier's plant.

8.1.2 F.O.B. means "Free on Board," and implies that the goods will be delivered for transport, whether by truck, train, ship, or other manner.

8.1.3 The initials F.O.B. should always be followed by the delivery site, which is the point up to which the supplier is responsible for the goods. Once the product is on board the mode of transportation it ceases to be the responsibility of the supplier.

8.1.4 As a result, *F.O.B. plant* requires that the supplier deliver the product at its fabrication site, up to the point where the goods are on board their means of transport.

8.1.5 The condition *F.O.B. plant with freight paid to site* subjects the supplier to the same conditions as in the case of *F.O.B. plant*, as far as delivery of the product, but the supplier also agrees to pay freight costs (but not other related costs such as insurance), from the plant to the delivery site.

8.1.6 Variations may include other delivery sites, such as *F.O.B. port, F.O.B. train, F.O.B border*, or other points between the plant and the site warehouse.

8.1.7 In the case of *F.O.B. site*, the delivery will take place when the goods arrive at the purchaser's warehouse or agreed-upon destination, but aboard the mode of transportation. Unloading is the responsibility of the purchaser. Expenses related to shipping cover everything up to delivery.

8.1.8 In the case of F.A.S. site, delivery occurs when the goods or product arrives at the agreed upon site and is unloaded. In this case, unloading is the responsibility of the supplier.

8.1.9 Whatever the conditions of the agreed-upon delivery site, changes to terms may imply a difference in price.

8.1.10 The period and place of delivery can not be changed except by common written agreement by both supplier and purchaser.

8.1.11 Regardless of the agreed-upon method of delivery (which is the physical delivery of goods from the supplier to the purchaser, its representatives, or transport companies), a "virtual delivery" may be established in order to comply with the contracted delivery period.

8.2 Determination of delivery terms for imported goods and equipment which are fabricated out of country:

8.2.1 Determination of commercial delivery terms on purchase orders for imported goods and equipment will depend on the most convenient method of delivery for the purchaser, depending on the circumstances of each operation. Pemex Director General's "Selection of Delivery Terms for Purchase Orders of Imported Goods and Materials" regulations will be followed.

9. Conventional Penalties

9.1 For delay in delivery:

9.1.1 Deliveries made after the agreed-upon date will result in penalties against the supplier, to the equivalent of two to the thousandth per cent of the contract total for every calendar day of the delay, to a maximum of 20 per cent.

9.1.2 Suppliers who suffer unjustifiable delays should provide invoices with credit notes pertaining to their contract penalties, corresponding to the number of days of delay between the delivery date and the date agreed upon in the original contract, supplement, or authorized extension.

9.1.3 The credit notes issued for contract penalties will be discounted from the corresponding invoices of the goods, without affecting the agreed-upon payment terms.

9.2 For Rescission or Cancellation

9.2.1 Before the termination of the agreed-upon delivery date (original or modified via supplement or authorized extension), the supplier should present the Purchasing Division with a request for extension on the delivery of the goods (partial or complete). Should the request not be carried out in this manner, Pemex will review the contract in accordance with the Law of Purchasing and Public Works, Article 92, last paragraph, and provide the supplier with written notice of non-compliance. The supplier will have 10 working days to present evidence he considers to be relevant.

Once the 10-day period has passed, the dispute will be resolved taking into consideration the arguments and evidence presented by the supplier. The resolution should be well documented and explained, and presented in writing to the supplier.

Rescission of the contract will result in the application of the contract guarantee bond, equivalent to 30 per cent of the contract value or of the portions not delivered, as long as portions received are not required for a unit or piece of equipment which would allow its independent use.

9.2.2 Penalties as a result of contract rescission will be automatically discounted from pending payment invoices the supplier may have with any division of the State Petroleum Industry.

9.3 In contracts entered into under variable price conditions, the penalties will be calculated according to the updated contract value, as agreed upon in the contract.

9.4 Contract penalties will not be condoned under any circumstances.

9.5 Purchasing areas are responsible for timely notice of penalty payment to the supplier in writing. They may request intervention of the judicial division should assistance be required to carry out their charges.

10. Extensions of Delivery Period

10.1 The supplier may request extensions to the delivery period, before its end, in cases of:

10.1.1 Earthquakes.

10.1.2 Fires.

10.1.3 Floods.

10.1.4 Tornadoes or hurricanes.

- 10.1.5 Strikes or unpreventable shutdown in the administration of the supplier's firm.
- 10.1.6 Martial law.
- 10.1.7 Political uprisings.
- 10.1.8 War.
- 10.1.9 In general, the lack of prime materials as a result of unforeseen circumstances which make fabrication or supply impossible.

10.2 Cases of delays or refusal to grant import permits or payment in foreign currencies will be included in the category of Unforeseen Circumstances, as long as they are not the result of negligence on the part of the supplier.

10.3 Extensions will be granted without penalties when the supplier's request is indisputably the result of Pemex's actions or negligence.

10.4 Extensions due to Unforeseen Circumstances will be granted when suppliers are able to demonstrate that said circumstance affected their purchasing, production line, and/or distribution.

10.5 Suppliers may present the Contract Division with one or various written extension requests due to one or more of the aforementioned causes, within five working days of the incident(s).

Should the request not be attended to accordingly, the supplier may reapply, register his/her complaint, or declare his/her discontent before the corresponding control unit, following the proceedings outlined in the third paragraph of section 5.1 of this document.

10.6 In cases where extensions are granted without penalty and the supplier delivers his/her product or goods within the granted period of time, no penalties will be applied, as the new extension date replaces that which was originally agreed.

10.7 In cases where the supplier wishes to present a request for extension without just cause, Pemex will analyse the case through its legal division, and will notify the supplier within 15 working days. If the request is granted, no changes in price will be granted, and penalties will be applied. Should the request be refused, the aforementioned Conventional Penalty will be applied to the updated value of the contract.

10.8 When extensions are granted according to the established proceedings, they will not be considered as delays nor will they impede the supplier from participating in other bids or contracts with Pemex, unless it is determined according to Article 41 of the Law of Purchasing and Public Works that the supplier has failed to comply with contract obligations.

10.9 In cases of authorized extensions without penalty, adjustments in price will be calculated according to the new delivery date agreed upon in the extension.

11. Price Adjustments

11.1 Adjustments according to the rise or fall in prices will proceed according to Articles 51 of the Law of Purchasing and Public Works and 34 of the Law of Purchasing, Rental, and Contracting of Services pertaining to Goods and other legal guidelines authorized by the federal government.

Prices subject to adjustment will be determined according to an adjustment model indicated in the Bid Basis or Request for Quote in order that they be considered within bids and later included in the contract.

11.2 Adjustment to Prices will only be authorized in cases where the change was previously considered within a contract, according to the following models:

11.2.1 Generic Formula
Generic Formulas are those which are considered within the August 12, 1982 Accord, written by, among others, the Mixed Consulting Commission for Purchasing of Petroleos Mexicanos, for a product or series of products, and those which were added at later dates. Adjustments will be calculated according to methods approved by the Secretariat of Commerce and Industrial Investment, using cost information developed by the Bank of Mexico, or the Federal Electric Commission through the Index Bulletin.

11.2.2 Specific Formula
In the absence of a Generic Formula, Pemex may establish within its bid basis or request for quote a specific formula which will also form part of the contract. Should the application of the formula cause a smaller increase than the minimum designated in the contract, an adjustment calculated according to the same formula will be authorized. The maximum increase designated in the contract will apply in cases where the calculated increase exceeds that amount.

11.2.3 Price Index

In the absence of a generic or specific formula, Pemex may, at the supplier's request, authorize a price adjustment index for contracts with delivery terms of more than 90 days. This index must be representative of the product considered in the contract, in accordance with information published by the Bank of Mexico or the Federal Electricity Commission, through the Index Bulletin.

Due to their importance and the lack of a corresponding Generic Formula, capital goods will be determined according to the National Index of Producing Prices of the Group Division 2.08, published by the Bank of Mexico or the Federal Electricity Commission, in the aforementioned bulletin.

11.2.4 Variation in Official Prices

In the case of Official Price lists, variations will be authorized by the Secretariat of Commerce and Industrial Investment, the National Treasury, or any other official equivalent, even when the delivery term is under 90 days.

11.3 In cases of price adjustment, calculations will be made from the date of quotation, regardless of the period during which the offer is in force. Closing date will be that of product delivery, taking into account any extensions or adjustments to the authorized program.

If the supplier presents his adjustment invoice within 10 working days after Promise of Payment is issued for the original amount, Pemex will cover both amounts within the original contracted period of payment. If the adjustment invoice is not presented during that time, a second payment term will come into effect on the date the invoice is received.

In cases of Generic Formula (11.2.1), Specific Formula (11.2.2) and Price Indexes (11.2.3), the base index will be the month corresponding to the date of quote and the final index will be the month corresponding to the contracted delivery date or date of satisfactory inspection, whichever comes first.

Because indexes are published two months after the fact, the applicable adjustment factor will be estimated according to available information, up to two months before delivery.

Most contracts will be formed under fixed price conditions.

11.4 In cases where advance payments and instalments are authorized, they will be fixed according to net price on the date on which they are paid to the supplier. Only the remaining balance will be subject to adjustment.

The condition Fixed Price will be compulsory in cases where the contract is settled during the period in which the offer remains in force and where the delivery period of the goods does not exceed 90 days, beginning the date of contract signature by the supplier.

11.5 Price adjustment will take place in cases where due to special circumstances or the characteristics of the goods to be acquired, such as long periods of fabrication, a price adjustment is considered within the contract.

It may also take place in cases beyond the control of the fabricator and due to conditions of the national economy which affect the supplier's plant, as long as an official declaration is made to that effect.

This will occur when investments suffer a price increase, as long as they are authorized by SECOFI and published in the *Diario Oficial de la Federación* (Daily Bulletin of the Federation).

All cases will be subject to the Pact for Stability, Competitiveness, and Employment, or its equivalent under future administrations.

11.6 In the case of deliveries after agreed date:

11.6.1 If the supplier has obtained a supplement to the contract or an authorized extension, he/she may present an invoice for the adjusted amount, taking into consideration the authorized delivery date.

11.6.2 If the supplier has not obtained a supplement or authorized extension, he/she may present a scaled invoice, calculating the quantity up to the last delivery date considered in the contract (either that of the original or the last contract supplement) and presenting the credit note for the delay. Should the supplier obtain a supplement or authorized extension at a later date, he/she may recover partial or total payment of the credit note.

11.7 In all cases requiring authorization of price increments, decisions will be presented to the supplier within a period of no more than 30 calendar days from the date the request is received.

In order to determine a price increase over the amount originally contracted, suppliers must comply with the following regulations:

- Law of Purchasing and Public Works
- Agreements Pemex may undertake with Industrial Chambers and Associations, in the Senate of the Mixed Consultive Commission on Purchasing
- Regulations Governing Commercial Relations between Pemex and its Suppliers
- Agreements between the Federal Government and Producing Sectors of the Country (Economic and Social Pact)

12. Guarantees

12.1 Pemex may require that its suppliers guarantee the following:

a) Bid bond to guarantee offer

b) Contract bond to guarantee compliance of contract

c) Equipment warranty

d) Guarantee to cover advances or instalments.

Determination of form, terms, and amounts of any of the above guarantees will be itemized within the bid basis or request for quote as well as in the body of the contract, according to institutional policies in force at that time.

12.2 Minimum amounts for guarantees that Pemex may require are the following:

a) Bid bond - five per cent of the offer

b) Contract bond - 10 per cent of the total amount of the original contract

c) Equipment warranty - 10 per cent of the total amount of the original contract. This may be incorporated by the supplier into the contract bond.

d) Guarantee to cover advances or instalments - 100 per cent of the amount to be paid.

12.3 Contract Guarantees required by Pemex should be carried out by bond expedited by a Pemex-approved institution, except in cases where it is decided that other means may also be used to guarantee Pemex's interests in the contracted operation.

12.4 Return or cancellation of bonds:

12.4.1 Return of bid bonds to guarantee offer: These guarantees will be returned to bidders who have been disqualified, once that decision has been communicated.

Bonds of losing bidders will also be returned immediately following the awarding of the tender, upon written request. Winners' bid bonds will be returned to them upon reception of the contract guarantee.

12.4.2 Contract and equipment bonds: These bonds will be returned by Pemex once suppliers have complied with their contract obligations or once the guarantee period of the contract has finished, according to the following:

a) Delivery of goods to the complete satisfaction of the corresponding division.

b) Termination of the guarantee period relative to equipment operation, as long as no complications have arisen during said period.

c) When the supplier has complied with contract duties or the guarantee period has terminated, guarantees will be returned through written request to the corresponding purchasing division.

The purchasing division will return the guarantee within 15 days of receipt of the supplier's request.

12.4.3 Release of bonds pertaining to advances and/or instalment payments: These guarantees will be released once suppliers have completely complied with contract obligations for advances and/or instalment payments, or once they have been returned. They will be returned within 15 calendar days of receipt of the written, documented request.

In cases where partial payment has been authorized, the purchasing division will allow suppliers to correspondingly reduce the amount of the guarantee relative to the approved advance, such that it cover only the portion not yet returned or applied, as long as the balance of the guarantee not be less than 20 per cent of the contract total.

12.4.4 The contract guarantee, in case of cancellation of the contract for reasons beyond the control of the supplier, will be released according to written agreement by both parties. In cases of contract rescission due to non-compliance or at the supplier's responsibility, the bond will be applied immediately.

13. Advances and Payment by Instalments

13.1 In cases of goods contracted for custom design and fabrication, or in cases of long periods of fabrication, Pemex may authorize, according to its means, advances and/or payment in instalments.

13.1.1 Bid basis will indicate cases where advances and/or instalments are to be authorized, stating the percentage of advance and the basis according to which instalments will be paid.

13.1.2 Advances or net instalments should be discounted from the total, subject to indexing, apart from the date on which they are received by the supplier.

13.1.3 Advances may not be greater than 50 per cent of the contract value. When engineering necessary for the fabrication of goods is to be provided by the supplier, an advance of up to 25 per cent of the contract total may be authorized, if the contract total is fixed. An additional 25 per cent may be authorized once the engineering is approved by Pemex. In either case the advances or instalments will be contracted on fixed price terms.

13.1.4 When advances have been authorized, they will not be subject to price indexing.

13.2 The advance, if established within the contract, should be requested by the supplier within 15 calendar days of the contract's signature.

13.2.1 Advances will be paid within 15 working days of presentation of the request, as long as established requirements have been met.

13.2.2 To receive an advance, suppliers must extend a bond for the total amount of the payment in the name of Petroleos Mexicanos or the Subsidiary Organization to which it is selling.

13.3 Payment in instalments included in the contract should be requested by the supplier once his/her contractual obligations have been met.

13.3.1 Contracts may authorize instalments based upon fabrication advances payable in quarterly payments.

13.3.2 Instalments will only be authorized when stipulated within the bid basis.

13.3.3 Instalments are independent of advances, as such contracts may authorize advances and instalments, the sum of which must not exceed 50 per cent of the total contract value and must be supported by their respective guarantees.

13.3.4 To calculate the amount of instalments, the quoted price must be updated according to the agreed formula since the date of presentation of the offer, up to the corresponding date of payment of the instalment. Updates are made on the net value of authorized payments.

13.3.5 Instalments will be paid 30 calendar days after presentation of the supplier's invoice, as long as contractual obligations have been met.

13.3.6 To make instalment payments, Pemex, through its inspectors, will verify the advance of the work in progress, according to contract stipulations.

13.3.7 When advances or payment in instalments are authorized, and the supplier does not deliver contracted goods according to the terms and conditions outlined in section 9.2.1 of these regulations, said contract will be rescinded and Pemex will cash the bond for the total amount of the advance and installations, adding financial costs according to a rate of interest equal to that established by the Law of Investment of the Federation in cases of extension for payment of fiscal credits.

14. Invoice Proceedings

14.1 Invoices should contain a description of the acquired articles, the contract number, purchasing division, Pemex code, quantity, unit of measure, unit price per section, and total amount (expressed both numerically and written in Mexican pesos). Invoices should be signed by the supplier.

14.1.1 In cases of partial shipments, the supplier may present as many invoices as are necessary to finish with the contract total, making references to and annexing copies of the original contract, indicating the balance to be paid.

14.1.2 In cases of contracts for shipment to various warehouses, the supplier should quote each shipment separately.

14.2 In the case of contracts requiring inspection, suppliers should annex proof of satisfactory inspection, which should consist of the following: Inspection certificate, stamp on the invoice, or seal on the waybill, or any other specific authorization requested by Pemex.

14.3 For F.O.B. plant deliveries, the supplier should present invoices for goods approved by inspection. In the case of capital goods which are considered within Pemex's approved list, the supplier should present a request for transport, sealed by the transport area or the date of receipt, instead of a waybill. Should the supplier opt to deliver to an authorized warehouse, he/she should attach proof of delivery.

14.4 For deliveries marked F.O.B. Plant with Freight Paid to Site, the supplier should present invoices for the approved, inspected goods as well as the waybill; transportation bills should also be presented if quoted separately. In all cases the insurance costs will be paid by Pemex.

14.5 For deliveries marked F.O.B. Site, the supplier will present invoices for approved goods at the corresponding purchasing division of Pemex, along with Pemex's stamp of receipt which should include date, name, signature, and file number of the employee to receive the merchandise.

14.6 When invoices are presented under conditions which vary from the original contract (quantity, price, delivery site, specifications, etc.), the supplier should present the contract annex or supplement.

14.7 In the case of a deduction (for late delivery, etc.), the supplier should present corresponding credit notes.

14.7.1 Should an extension have been approved, a copy of the approval should be annexed.

14.8 When a contract falls into the Operating Division, the supplier should present copies of the same or confirmation from that area that the delivery was made in a timely fashion.

15. Promise of Payment

15.1 The supplier may present any number of contracts at any one time, and Pemex will immediately present a provisional promise of payment to cover the presented documentation.

15.1.1 In a period of no more than 15 days from the date the provisional promise of payment is issued, Pemex will deliver to the supplier the official promise of payment, dated on the same day, as long as the supplier has complied with contract obligations necessary for invoice payment.

15.1.2 Invoice receipts for price adjustments will be issued with the same date of payment as stipulated in the original invoice.

16. Invoices for Price Adjustments

16.1 Price adjustment invoices should include a description of their calculation.

17. Rescission and Cancellation of Contracts

17.1 Both Pemex and its suppliers have the right to rescind or cancel assigned contracts, when the cause is justifiable or the result of unforeseen circumstances.

17.2 When Pemex cancels a contract, by public order or due to indisputable contravention of the Law of Purchasing and Public Works, suppliers may invoice for non-recoverable expenses that they may have incurred, provided that they be reasonable and directly due to the contract at hand and defined within chargeable expenses, from the date of purchase of the bid basis. Negotiations will be carried out in such cases with the purpose of coming to a common agreement as to the appropriate compensation to be paid (see section 3.6).

17.3 In cases where the supplier has chosen to rescind or cancel a contract, the resultant fine should cover Pemex for concepts established in section 9.2.1.

17.3.1 Conventional fines will not be charged in cases where the supplier is able to demonstrate that cancellation was the result of one of the Unforeseen Circumstances defined in section 9.1.

17.3.2 Fines in the case of partial cancellation or rescission will be applied only to the pending portion of the contract, as long as the deliveries received do not form part of a complete unit, allowing for its use in an independent fashion.

17.3.3 Rescinded contracts will be re-contracted out via public tender or call to bid with at least three suppliers. Contracts will then be entered into with the successful bidders, as long as their proposal does not exceed 10 per cent of the amount originally assigned for the purchase.

17.4 Rescissions made by Pemex Administration due to the fault of the supplier will be carried out according to proceedings outlined in Article 92 of the Law of Purchasing and Public Works.

18. Suspension of Commercial Relations Between Pemex and Suppliers Due to Breach of Contract

18.1 In accordance with the Law of Purchasing and Public Works, suppliers will be banned from presenting offers or closing contracts when they are behind in delivery of goods or services due to their own actions, when they are in breach of other contracts which have negatively affected the purchaser, or when they have acted with malice or in bad faith during the process of contract awarding, negotiation, or while it is in force.

18.2 Generally, Pemex cannot receive proposals from or enter into contracts with suppliers who fall into any of the situations outlined in Article 41 of the Law of Purchasing and Public Works.

GLOSSARY

Advance
Payment which is made to a supplier shortly after the contract is signed and before the delivery of materials or start-up of work necessary for the completion of the contract.

Calculation of Dates
When not specified as to whether terms are in working or calendar days, calculations will be made according to calendar days.

When terms are expressed in working days, it is understood that the terms will not include Saturdays, Sundays, statutory holidays or holidays recognized by Petroleos Mexicanos according to the Collective Work Pact in force at the time.

Date of Quote
Calculation of an offer's period in force and price adjustment will be determined apart from the date on which the commercial offer was opened.

Payment in Instalments
Payment made to a supplier based on a percentage advance to cover fabrication and/or completion of the activities stipulated in the contract.

Delivery Term
The period stipulated by the buyer in the Request for Quote or in the Bid Basis and offered by the supplier in the quote, and confirmed in the contract. Calculation of term will be made apart from the date on which the contract is signed.

Aside from the delivery conditions stipulated in the contract, (e.g., F.O.B. Plant) a cut-off date may be established in either general terms or specifically, according to a specific event (e.g., request for inspection), for the purposes of:

- price adjustment
- breach of agreed-upon period of delivery and calculation of resultant penalty
- invoicing for payment
- others.

Fixed Price
Prices which the supplier promises not to increase until delivery of goods.

Prices will be fixed, i.e., not subject to variation, in the following cases:

- all deliveries which occur within a period of 90 days from contract signature, whether or not they have been quoted as variable
- all deliveries which have been quoted as fixed prices, regardless of date of delivery.

Prices Subject to Adjustment
Prices subject to modification according to formulas or conventions expressly stipulated in the contract, calculating variations apart from the opening of the commercial bids.

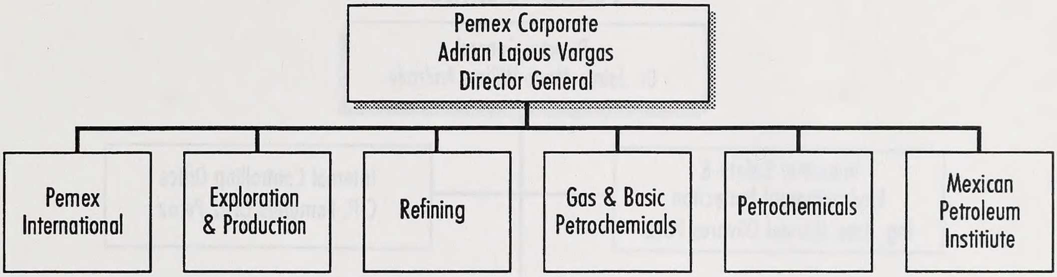
Extension on Delivery Date
Extension of delivery date originally agreed to in the contract, required by the supplier in order to comply with delivery of goods. Extensions must be requested before end of term in order to be authorized by Petroleos Mexicanos according to the stipulations mentioned in section 10.

Validity of Offer
Each and every item mentioned in quotes or proposals (availability for supply, specifications, delivery period, conditions of sale, etc.) will come into force at the commercial opening of offer. At that time, the supplier is obliged to accept the contract or purchase order offered by Petroleos Mexicanos, as long as the contract corresponds exactly to all terms and conditions made in the proposal.

Extension of Validity of Offer
The additional term during which the supplier promises to maintain prices of an offer once the original period has expired.

ANNEX

PETROLEOS MEXICANOS



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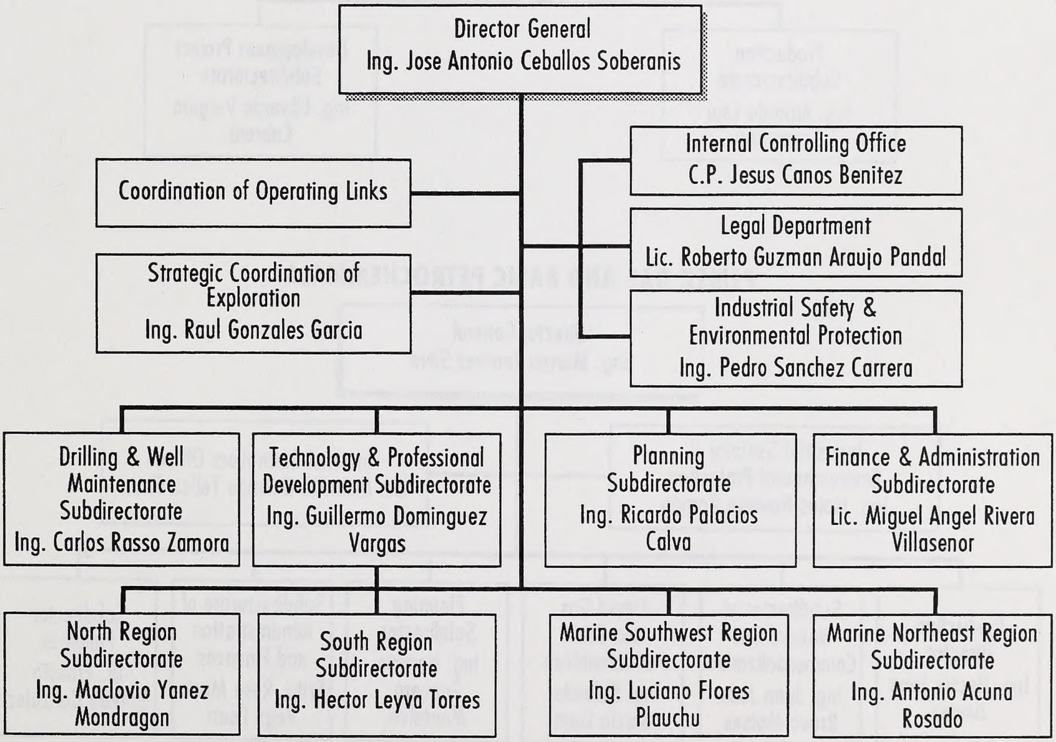
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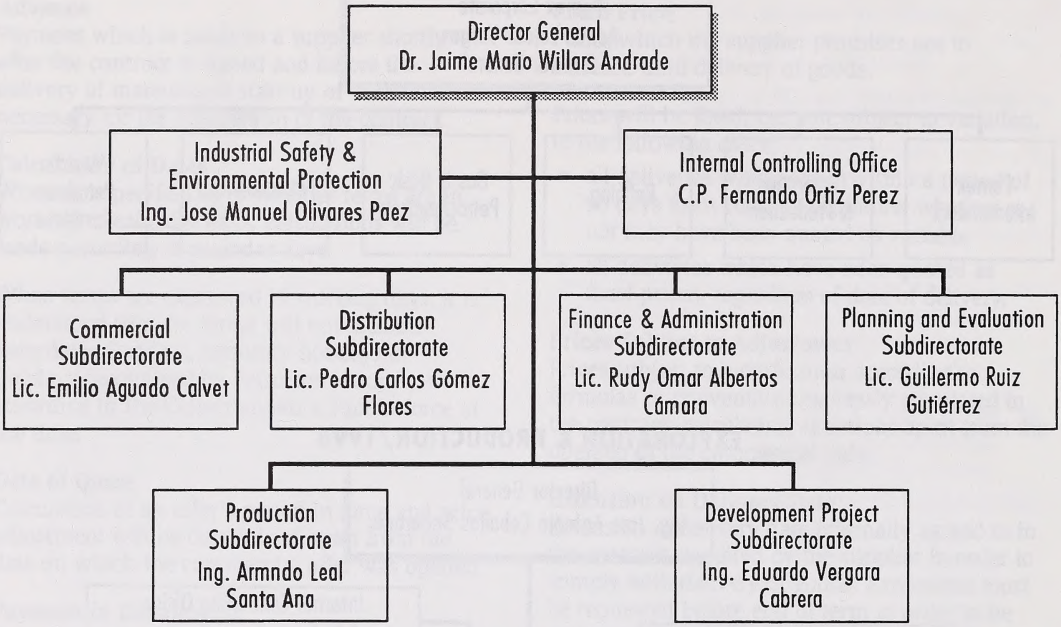
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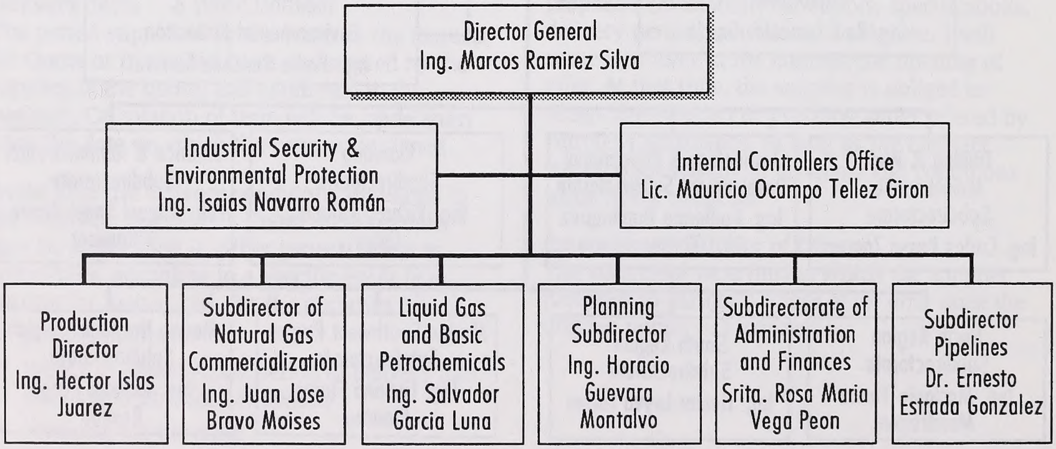
PEMEX GAS AND BASIC PETROCHEMICALS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